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de la loi sur l'accès à l'information**

Taltson Hydro Expansion Project – Background

Introduction

On March 3rd 2016 Canada's First Ministers released the Vancouver Declaration on Clean Growth and Climate Change (Declaration). This was an important multilateral commitment made by all First Ministers for their governments to work together to implement GHG mitigation policies in support of meeting or exceeding Canada's 2030 target of a 30% reduction below 2005 levels of emissions. This supports the Paris commitment which calls for significant reductions in global greenhouse gas (GHG) emissions to limit global warming to less than 2°C and to pursue efforts to limit it to 1.5°C above preindustrial levels.

Recognition of the unique circumstances of the north is an integral part of the Declaration. This includes commitments to implement strong, complementary adaptation policies to address climate risks facing our population, infrastructure, economy and ecosystems, in particular in Canada's northern regions; investing in clean energy solutions to help get Indigenous, remote and northern communities off diesel and adapting a broad range of measures that are adapted in particular to the realities of Canada's Indigenous peoples and Arctic and sub-Arctic regions.

Since the endorsement of the Declaration, the Government of the Northwest Territories has actively participated with the federal government and its provincial and territorial counterparts to help build the Pan-Canadian Framework (Framework), Canada's plan to address climate change and grow the clean economy which includes connecting this clean power across Canada through stronger transmission interconnections to help reduce emissions and support the move away from coal. The Framework is a comprehensive plan to meet Canada's climate change target, build resilience, grow the economy, and create jobs.

The GNWT recognizes that the scale of Canada's climate challenge is significant and is committed to do our part in the transformational change required to build a diversified and clean economy that also contributes to northern indigenous economies and therefore also to the important priority of achieving reconciliation. To this end the GNWT is proposing to partner with the federal government, territorial Indigenous governments in a Phase I expansion of production capacity at the Taltson Hydro facility and build the first ever intertie between territorial hydro power production and the provinces.

This transformational project would help address greenhouse gas emissions it would also provide an important clean growth economic diversification of the NWT and opportunities for indigenous government partnership; all of which support the goals and commitments agreed up on by First Ministers in the Vancouver Declaration

Vision

The Government of the Northwest Territories has a long term vision for electrical generation to establish a green energy corridor between the Northwest Territories and the rest of Canada. This is key to unlocking the territory's renewable resource potential and all of the associated environmental and economic benefits. Phase I of this vision is the development of the Taltson expansion.

A future Phase II expansion of the Taltson project could facilitate power distribution to Yellowknife and the Slave Geological Province. This would not only significantly reduce the territory's greenhouse gas emissions it would also remove a significant barrier to unlocking the vast economic potential of this region and ensure new mineral activities would have access to clean energy. This foundational project could, over the next several decades, facilitate the creation of a connected grid between hydroelectric facilities within the NWT, accommodate future demands on our hydro capacity including the City of Yellowknife, and link additional territorial communities to hydro generated power, reducing their dependence on diesel power generation.

Immediate Benefits

- Leverage existing storage capacity to generate over 60MW of long-term renewable energy exported to Saskatchewan.
- A Run of River green energy project with no new flooding required with minimal environmental impacts.
- 360,000 tonnes of greenhouse gas emission reductions annually for more than 50 years.
- Improve reliability and resiliency of the NWT electricity system.
- Job creation, local economic opportunities and partnerships with Indigenous governments.

Long-Term Benefits

- Connecting the NWT to the Canadian electricity system creates a market to sell incremental NWT green energy.
- Bridge the gap between short term industry needs and long term energy infrastructure.
- Build economies of scale that stabilize costs over time in the power creation and distribution system.
- The 60 MW Phase I development is the critical first step to connect the NWT to the Canadian electricity system – Phase II could deliver an additional 140 MW from

incremental hydro developments and reduce an additional 900,000 tonnes of GHGs annually

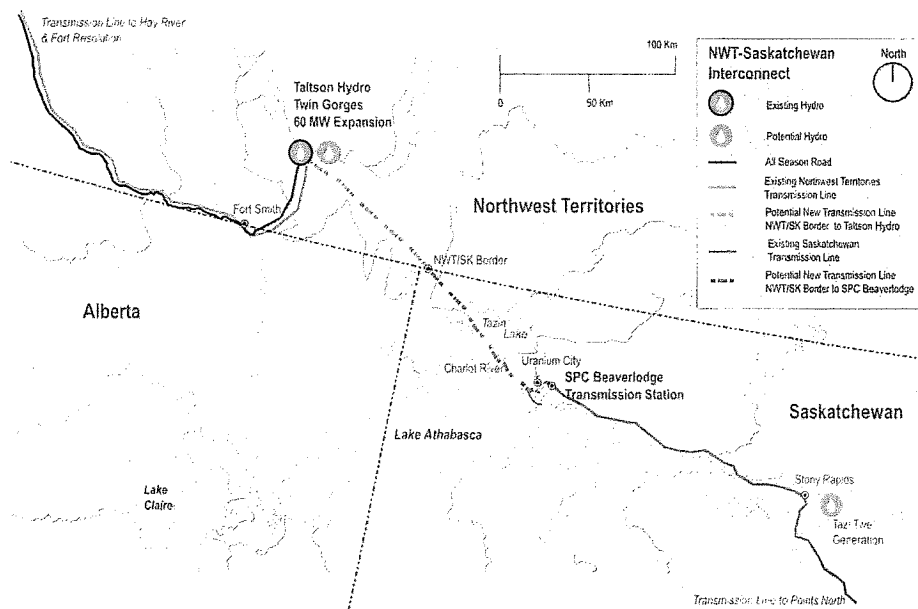
- Creates the potential to connect additional NWT communities to hydroelectric power and further reduce community dependency on diesel.

Partnership Approach

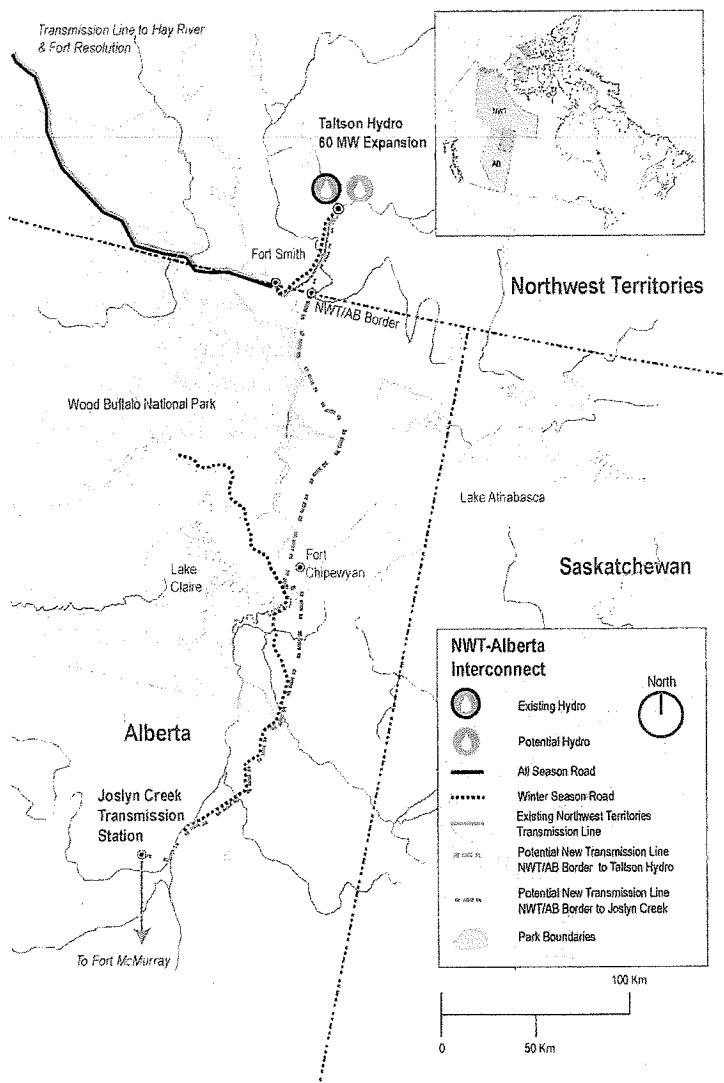
Based on the preliminary project costing, the GNWT estimates the cost of the Taltson Expansion Project to be between \$790 million and \$1.1 billion. A federal investment of fifty percent of project costs will ensure project sustainability, facilitate Indigenous government partnership and create long term benefits including significant clean growth economic diversification for the NWT and environmental benefits with a reduction of Canada's GHG emissions by 360,000 tonnes annually for more than 50 years.

Phase I – Taltson Expansion and Southern Intertie

A 60 MW power plant will be installed at the existing hydro facility. The project includes a new intake canal and powerhouse built adjacent to the existing facility. The additional capacity will rely on existing water storage capacity and require no flooding. The capital costs for this part of the expansion are estimated at \$500-600 million.



A 200 kilometre transmission line extending from the Taltson hydro facility at Twin Gorges would be necessary to connect the NWT to the Saskatchewan power grid. The distance is roughly 100 kilometres from Twin Gorges to the NWT/Saskatchewan border and 100



kilometres to connect near Uranium City in northern Saskatchewan. The preliminary transmission line project estimate is \$290 million.

A connection could also be made into the Alberta electrical system. This includes a 35 kilometre transmission line from the Twin Gorges hydro site to the Alberta border, and a 375 kilometre line to Joslyn Creek, north of Fort McMurray. The preliminary cost of the transmission line is estimated between \$400-500 million.

Project History

The Twin Gorges Hydro facility, located on the Taltson River, is owned and operated by the Northwest Territories Power Corporation. In 1965, the 18 MW power plant was built to meet the needs of the Pine

Point Mine. Surplus power has been available on the system since the Mine shut down in 1986. The existing power plant continues to be the primary source of power for the communities of Fort Smith, Fort Resolution, Fort Fitzgerald (Alberta), Enterprise and Hay River.

From 2001 to 2011, the GNWT invested \$18 million to advance the project business model and environmental assessment for the construction of a 60 MW hydro expansion project and to extend a 700 kilometre transmission line north to operating diamond mines in the Slave Geological Province. A project partnership was established between two Aboriginal governments and the Crown Corporation. The partners were involved and supportive of the project and were instrumental in moving the project through the environmental assessment process, particularly in relation to community engagement. It

is GNWT policy that new hydro generation projects will be developed in partnership with aboriginal governments. The GNWT is committed to maintaining this approach going forward.

Environmental Assessment

The Taltson Project was formally engaged in the environmental assessment process from 2007 to 2011. This means that a large base of research and information already exists for the Phase I expansion. Key project milestones already completed include:

- 2001-2003 Baseline environmental screening of the study area
- 2003-2006 pre-feasibility level design including field studies, topographic surveys, bathymetric surveys, geophysical investigation, subsurface investigation, terrestrial and aquatic environmental screening and community engagement.
- March 2007 Project Description – a Type A Water License Application & Land Use Permit was filed with the Mackenzie Valley Environmental Impact Review Board (MVEIRB).
- August 2010 MVEIRB Report of Environmental Assessment and Reasons for Decision was submitted to the Minister of Indian & Northern Affairs Canada (INAC).
- July 2011 - Taltson Expansion Project Report – preliminary detailed design and feasibility design to proceed to final design and construction

Transmission Line Studies

A Western Great Slave Lake System Feasibility and Planning Study was completed in July 2014. The study concluded that an interconnection linking the Snare Hydro system north of Great Slave Lake with the existing Taltson system was technically viable and provided preliminary routing and cost estimates for connecting to Alberta. Subsequent work provided baseline cost estimates from construction contractors for a transmission line intertie in Northern Saskatchewan.

Project Status

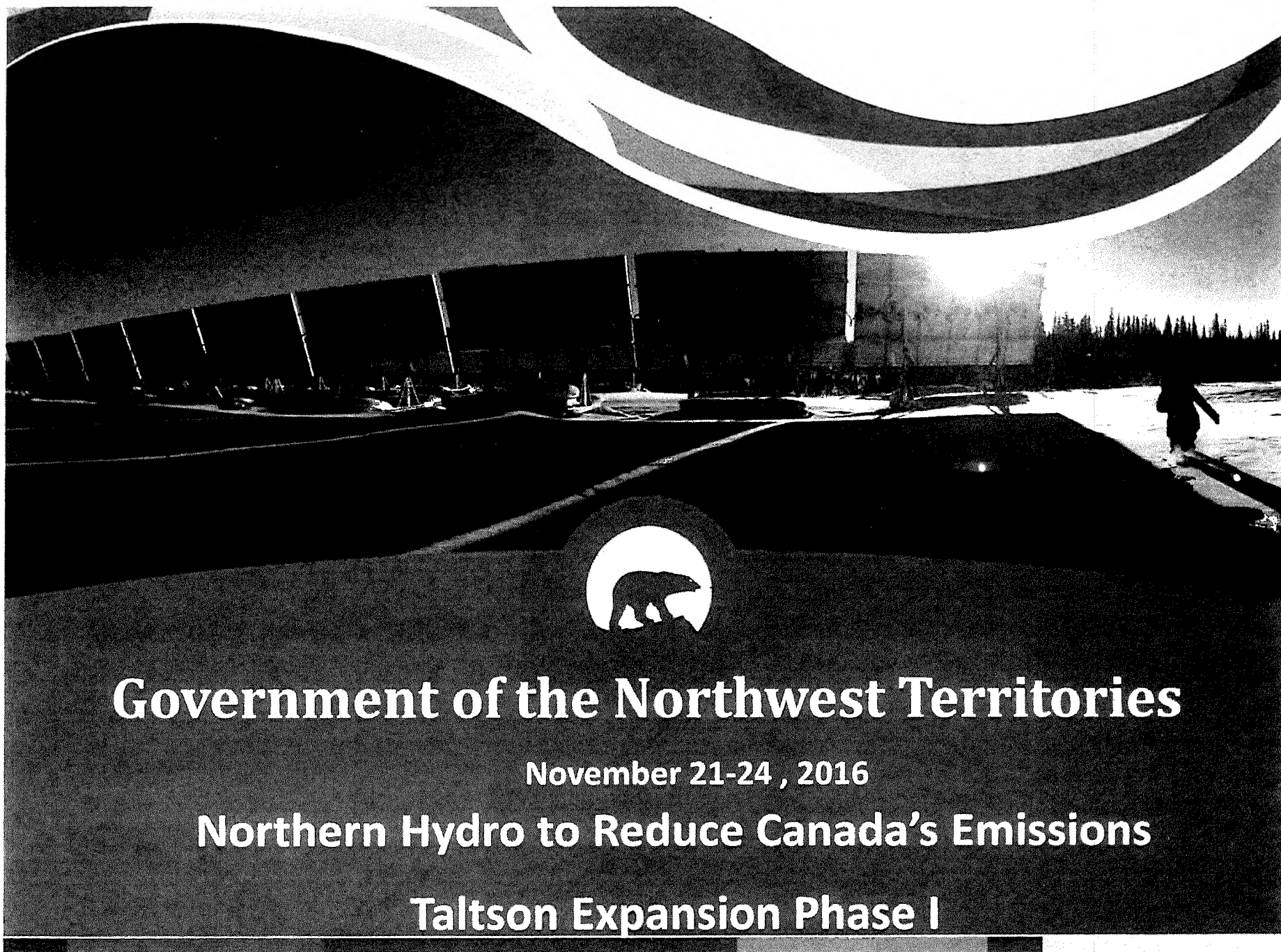
The environmental conditions necessary for the project to proceed from an Environmental Assessment perspective were very well defined when the project was halted. A southern interconnection presents a transformational opportunity and also introduces a new

transmission line corridor that has yet to undergo extensive design and environmental review. Efforts are underway now to:

- Define the business case based on market pricing
- Work with project partners and seek to define project timing and a critical path leading to a construction decision;
- Better define the level of federal involvement required;
- Engage aboriginal partners and define the business model for proceeding;
- Investigate transmission line design including right of way and environmental screening; and
- Begin preparing water license and land use planning documentation for a project description to be filed with regulators.

Conclusion

The Taltson Project is uniquely positioned to support Canada's commitment to mitigation and the reduction of Greenhouse Gas Emissions. Substantial recent and relevant work has been accomplished. This low-environmental impact hydro project increases the production and transmission of renewable energy, and acts to mitigate climate change in multilateral collaboration with the federal government, aboriginal governments, and across provincial/territorial borders. The GNWT requires an initial commitment of \$15 Million in support of the environmental assessment, detailed design work and other actions to move the project to the final decision. The GNWT is also looking to partner with the federal government for 50% of the project costs. The project is transformational, connecting a territory of Canada for the first time with the national electrical grid, providing economic development, improving energy security, and laying the foundation for further future development of green energy generation and the expansion of electrical transmission to power Canada's north.



Government of the Northwest Territories

November 21-24 , 2016

Northern Hydro to Reduce Canada's Emissions

Taltson Expansion Phase I

Outline: Hydro to Reduce Emissions

- Our Shared Objectives
- A Shared Hydro Legacy
- The Proposal
- The Investment



Our Shared Hydro Legacy

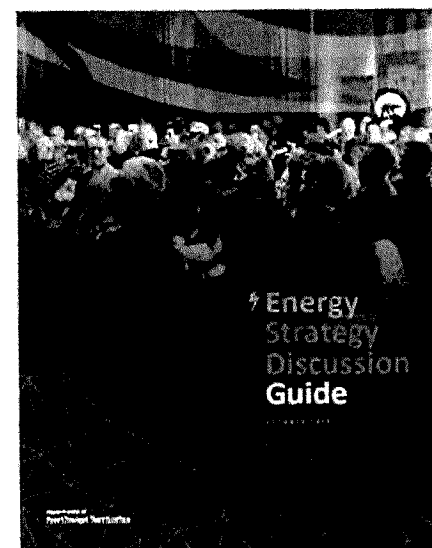
- Hydro systems in the NWT are legacy infrastructure from the 1940's and 60's.
- Hydro development could not have happened without federal support.
- Federal government should continue the legacy of nation building and supporting transformative energy projects



18 MW Taltson Facility

GNWT Objectives

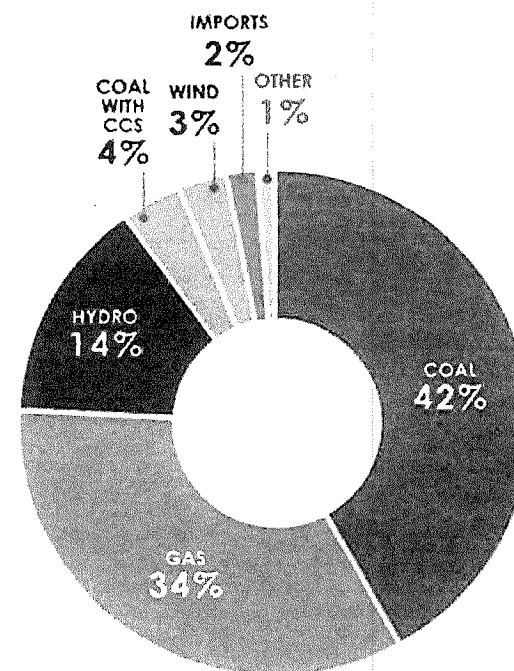
- **Developing a new Energy Strategy and Climate Change Strategic Framework**
- **Priorities include:**
 - Increase the production and transmission of renewable and alternative energy
 - Mitigate and adapt to climate change in collaboration with other governments
- **Support the Development of the Pan-Canadian Framework**
- **Support national objective to reduce GHG emissions**



Our Shared Objectives

- **Pan-Canadian Framework on Clean Growth and Climate Change**
- **The Paris Agreement**
- **Saskatchewan Energy leadership**
 - 50% renewables by 2030
 - Add 1,600 MW wind capacity
- **Alberta Energy leadership**
 - 30% renewables by 2030
 - Add 5,000 MW of new renewables

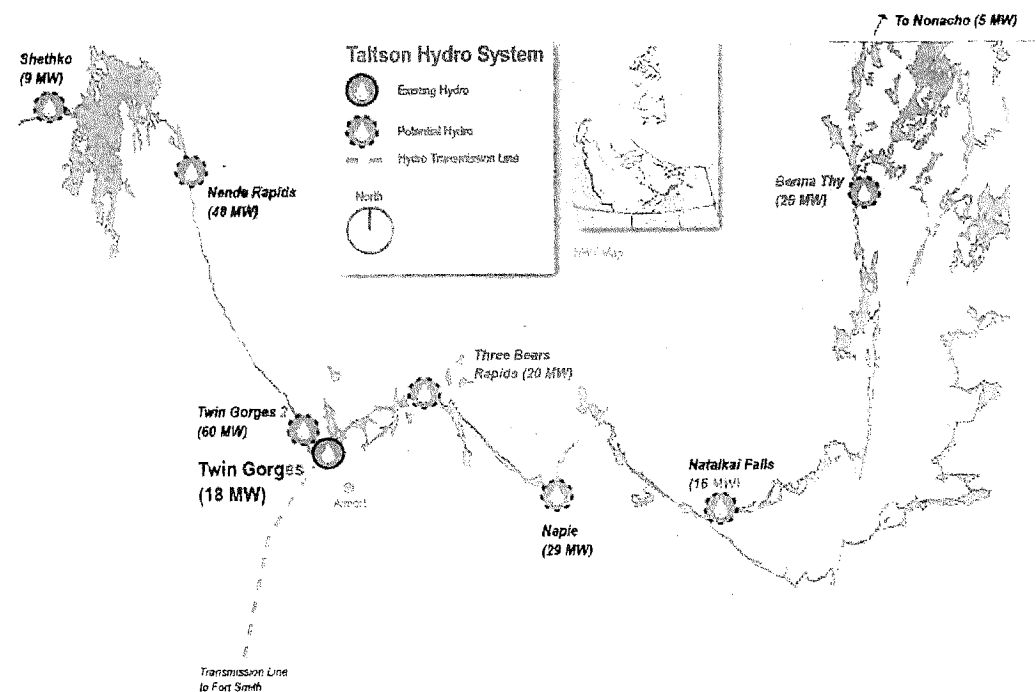
In 2015, Saskatchewan's power came from these sources:



 **SaskPower**
Powering the future

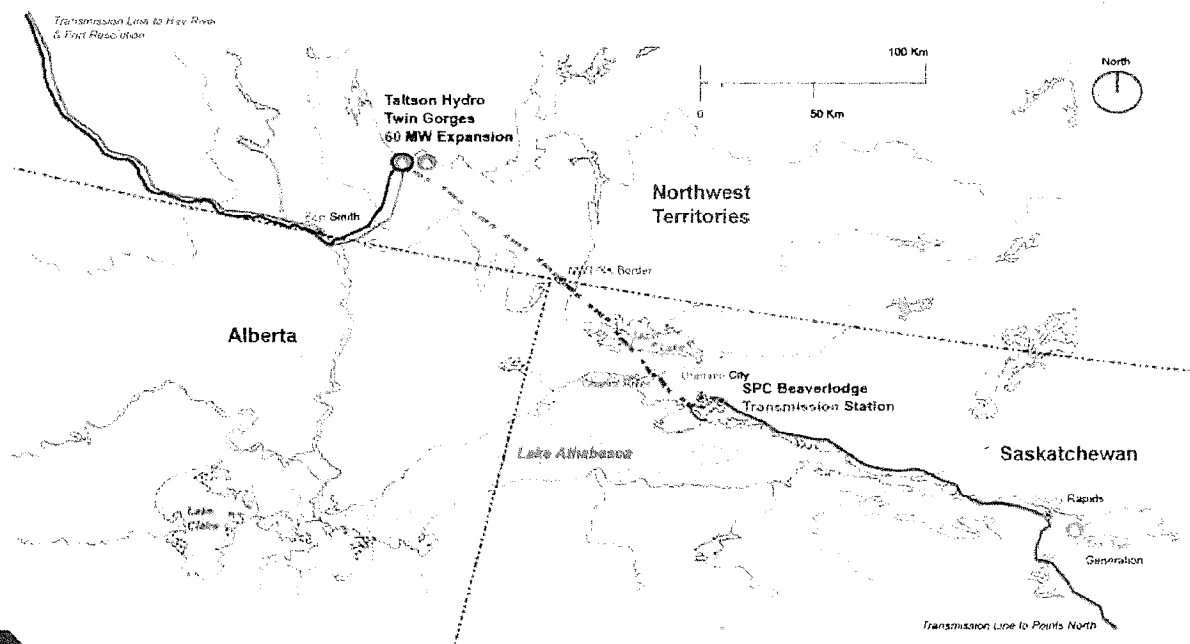
The Proposal: Taltson Hydro Energy Corridor

- 60 MW hydro project on a developed river with first power in 5 years
- Run of river with no new flooding
- \$18M invested by the GNWT so far
- Construction: 2019-2020
- First Power: 2022-23
- 140 MW additional hydro in future phases



The Proposal: Taltson Hydro Energy Corridor

- Transmission to displace coal in Saskatchewan or Alberta
- Phase I: 360,000t/y GHG reduction
- Phase II: 900,000t/y GHG reduction



The Taltson Investment

- **Estimated capital costs: \$700-995 million for Phase 1**
- **Federal cost-share of up to 50%.**
- **Remainder is self funding through electricity sales**
- **Federal investment:**
 - \$28/tonne GHG emissions reduction (lifetime)
 - Nation building: Extend the continental grid north of 60
 - Aboriginal partnership
 - Employment, skills, and economic Development
- **Phase II: \$1.1-1.2 billion (140MW)**
 - 900,000t GHG reduction

Summary

Innovative and Transformational Project

- Run of river and no new flooding
- Connect NWT to the continental grid: only 200km of transmission needed to connect to SK
- Displace 360,000t GHG from coal
- Stabilize power costs in the NWT

Excellent Investment

- For 50% cost share you get \$28/tonne lifetime GHG reduction
- Potential for Phase II at \$7/tonne

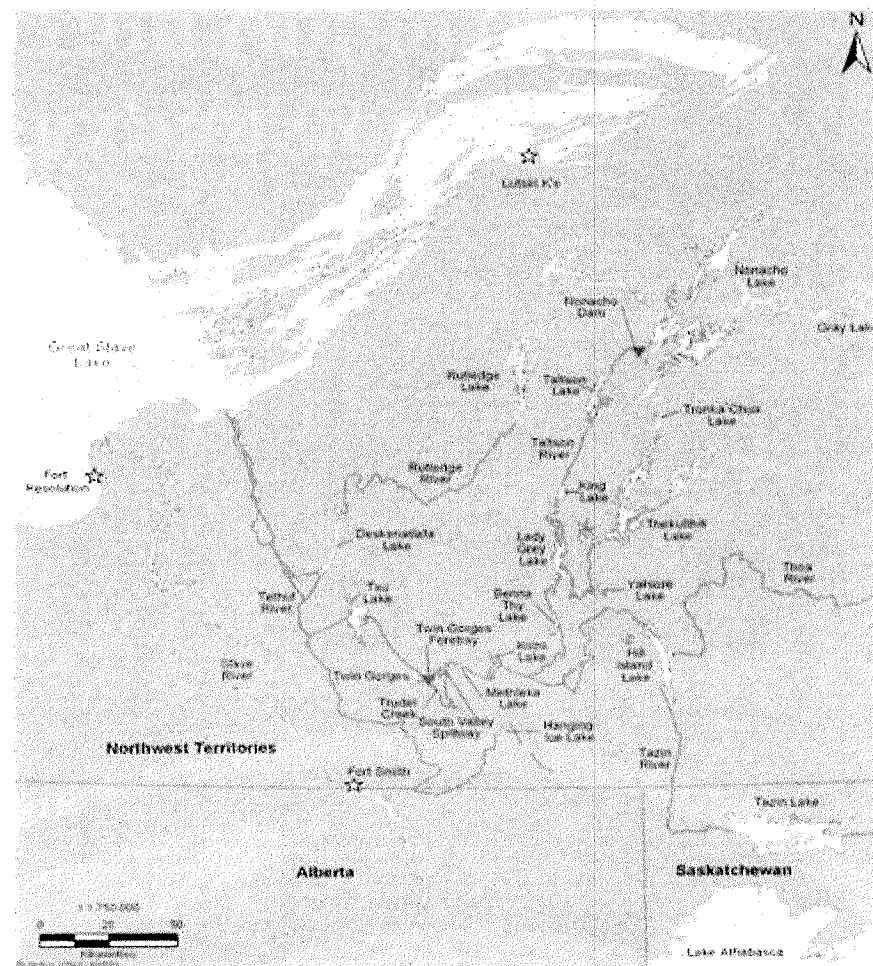


Taltson Hydro Expansion Southern Interconnection Opportunity

May 10, 2017

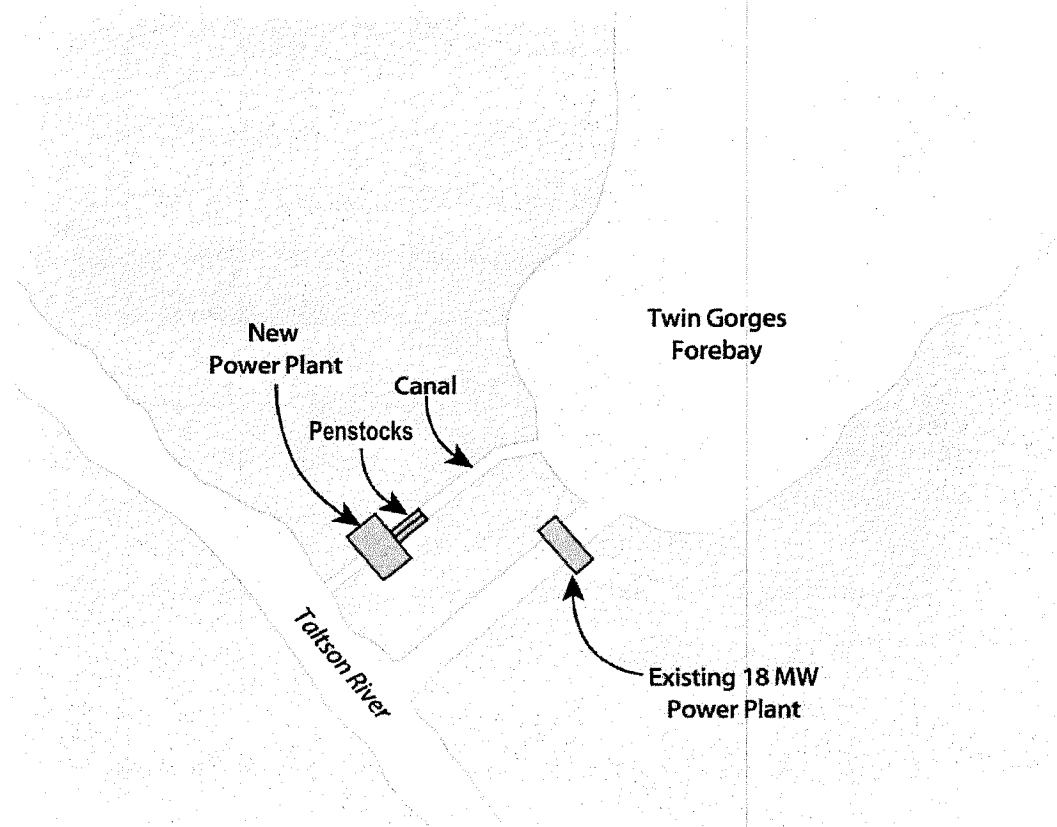
Outline – Taltson & Southern Interconnect

- Long Term Energy Objectives
- Taltson & Southern Link – Northern Energy Corridor
- Taltson Expansion – Primer
- Saskatchewan Market
- Alberta Market
- Project costs / energy production
- Next Steps



Taltson & Southern Link – Energy Corridor

- 60 MW / 440 GWh project on developed river
- Run of river with no new flooding
- Potential Markets
 - 400 km Transmission Link to Alberta
 - 200 km Transmission Link to Saskatchewan
- Stabilize cost of NWT power
- Reduce Southern GHG's - 360,000T
- Connect remote Alberta community to hydro



Long Term Jurisdictional Alignment

NORTHWEST TERRITORIES

Developing 10-Year Energy Strategy and Climate Change Strategic Framework to 2030

- Establishing emission reduction targets for electricity / transportation / Heat / energy efficiency
- Investing in remote diesel communities
- Exploring hydro potential & other renewables

ALBERTA

- Add 5,000 MW Renewables by 2030
- Transitioning to energy market and capacity market
- Seeking to retire coal generation
- Renewable energy credits

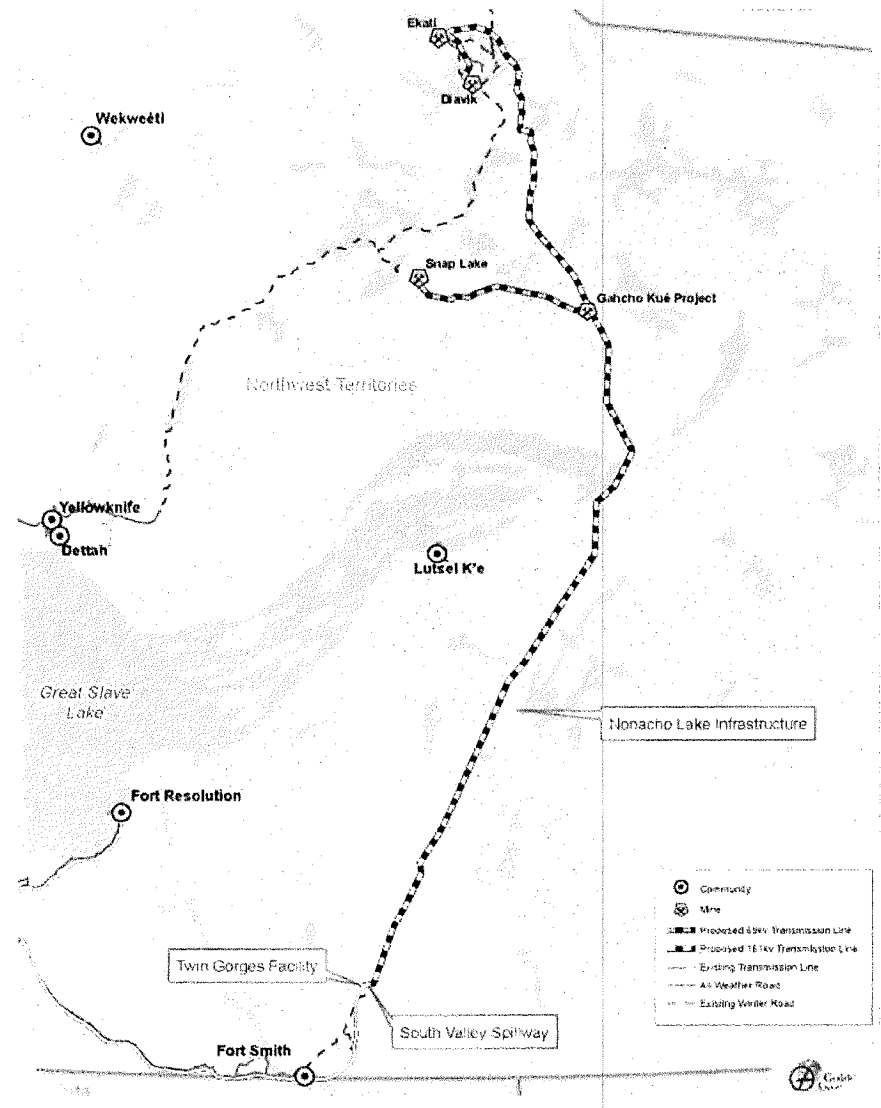
SASKATCHEWAN

- 50% increase in renewables by 2030
- Replace 1,100 MW with renewable energy
- Add 1,600 MW Wind capacity
- Seeking to retire coal generation / carbon capture

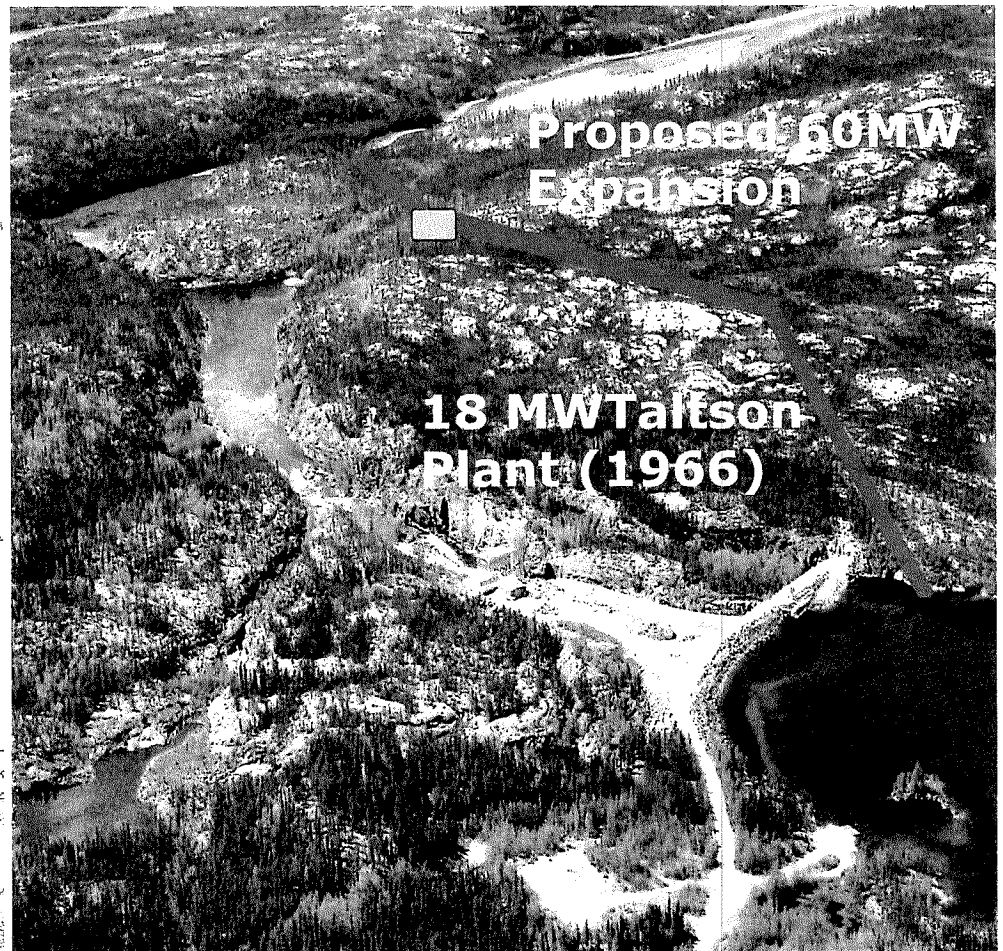
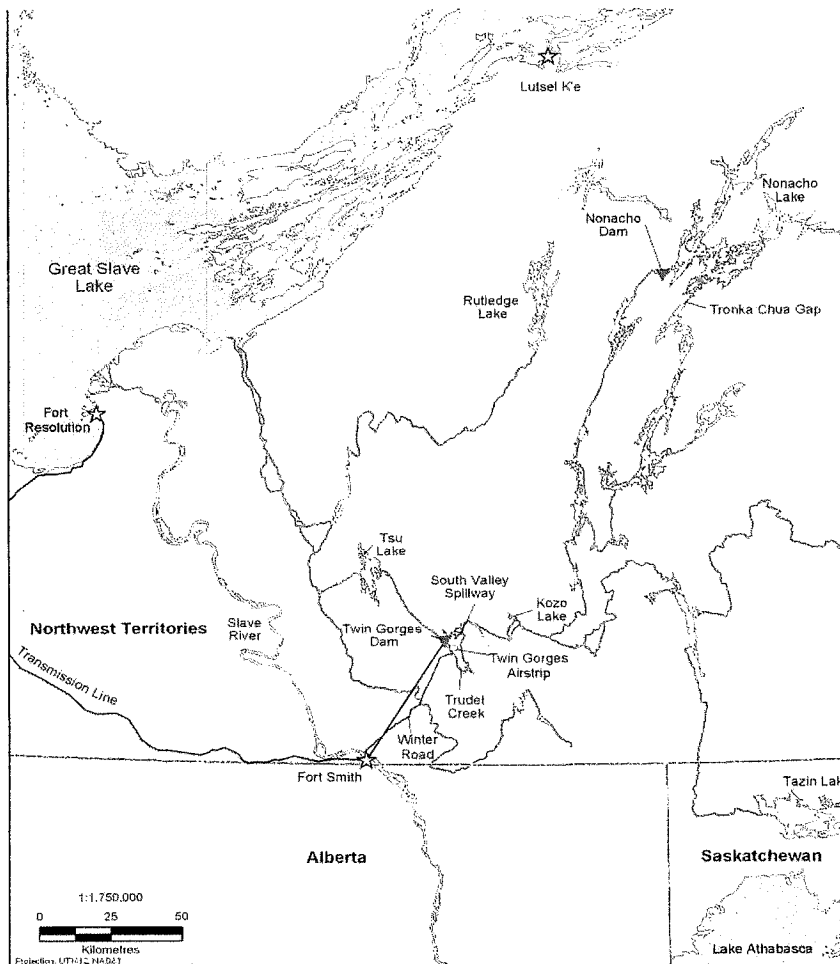
Taltson Primer – A brief history

2001-2011 – 15 Million invested

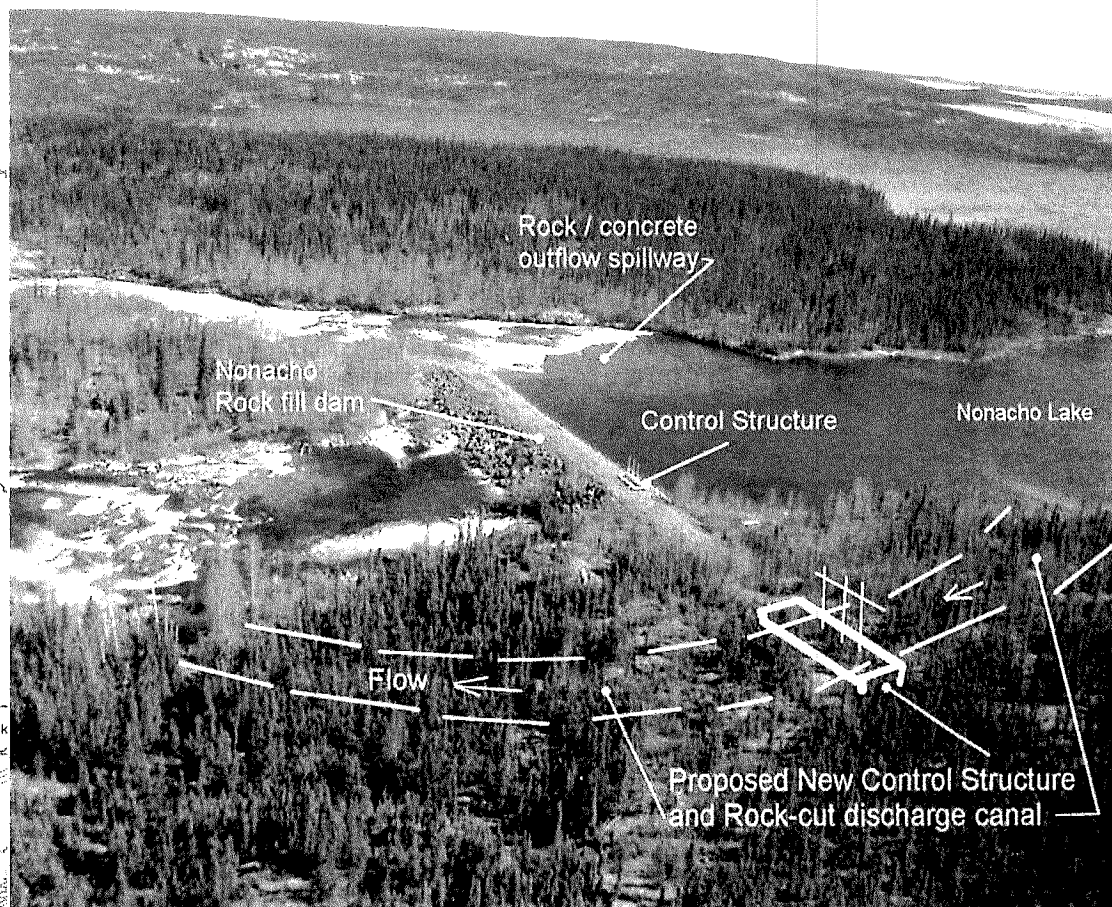
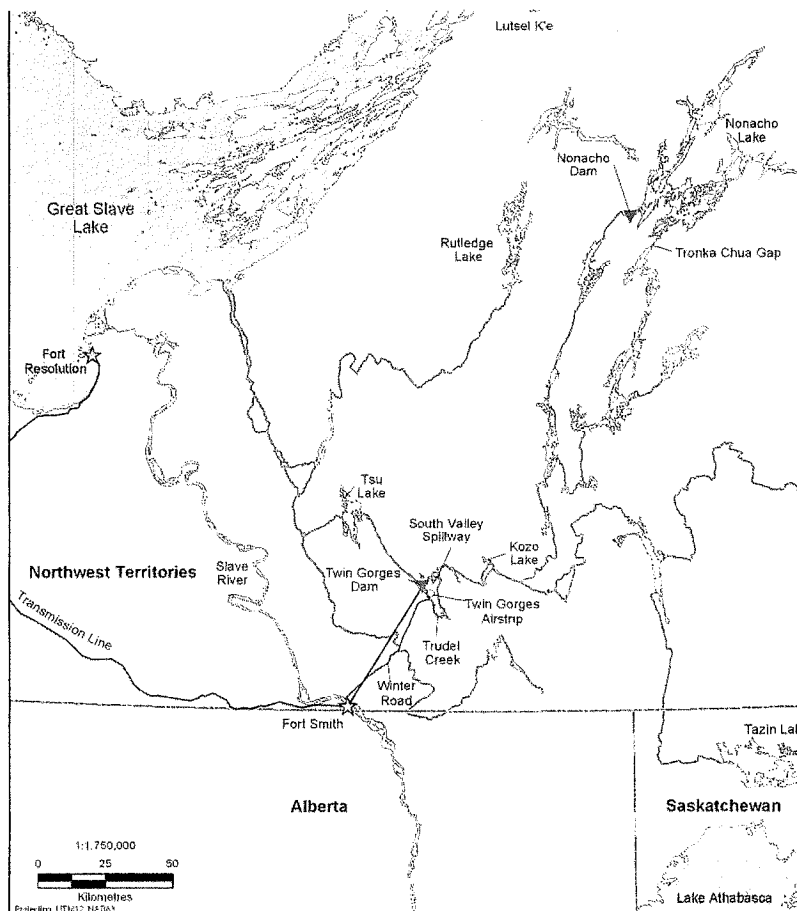
- 36-56 MW Expansion proposed
- 700km T-line North to diamond mines
- 4 year Environmental Assessment process
- August 2010 - NWT Regulator Recommended project approval
- March 2011 – GNWT halted project



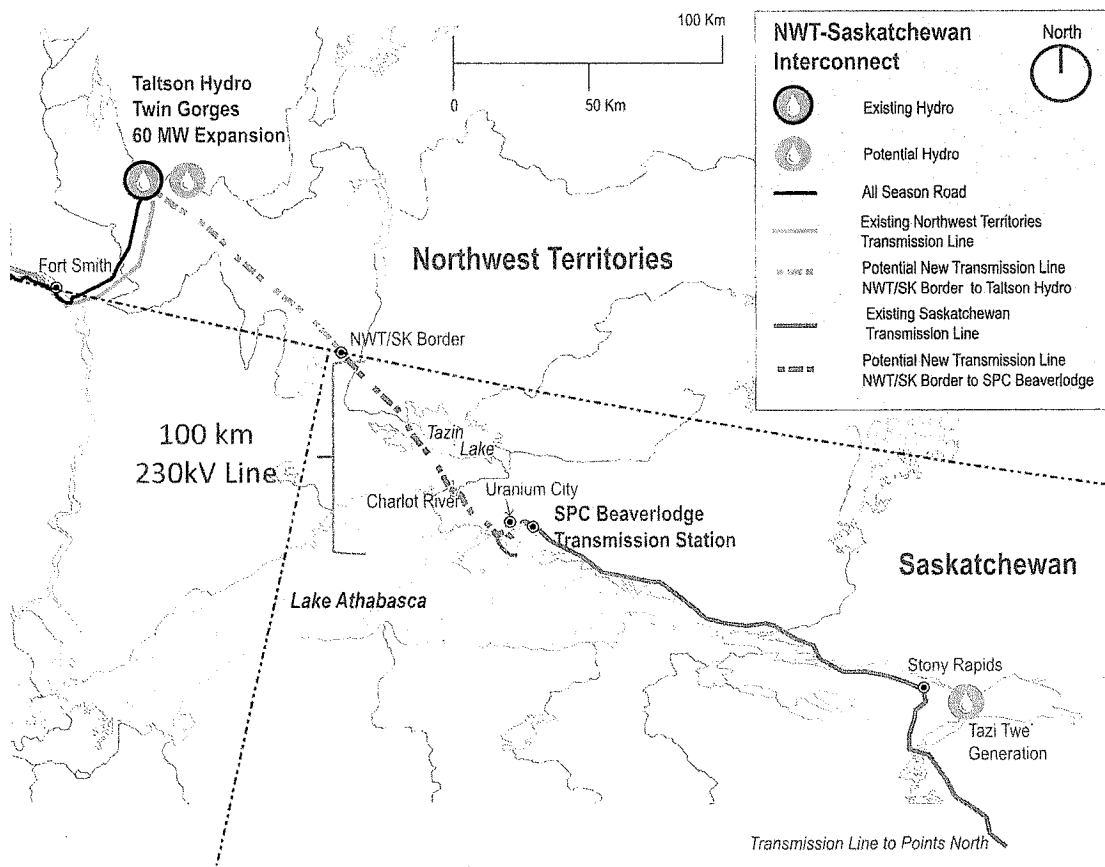
Taltson Primer - Twin Gorges + 60 MW



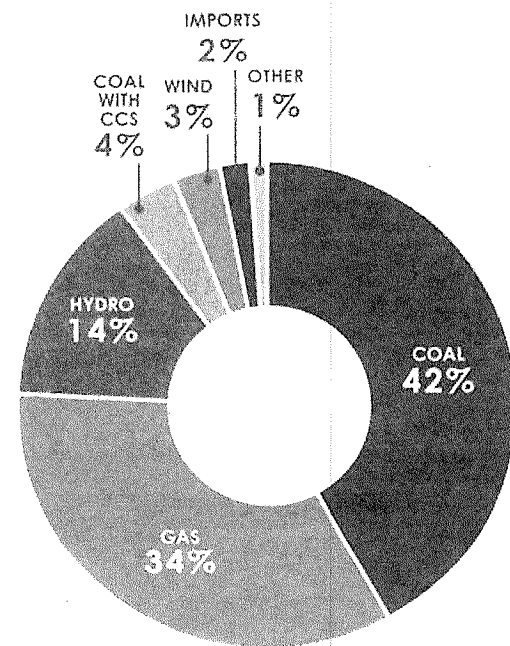
Taltson Primer - Nonacho Control Upgrade



Saskatchewan Market



In 2015, Saskatchewan's power came from these sources:



Source: Saskatchewan Power Corporation

SaskPower
Powering the future

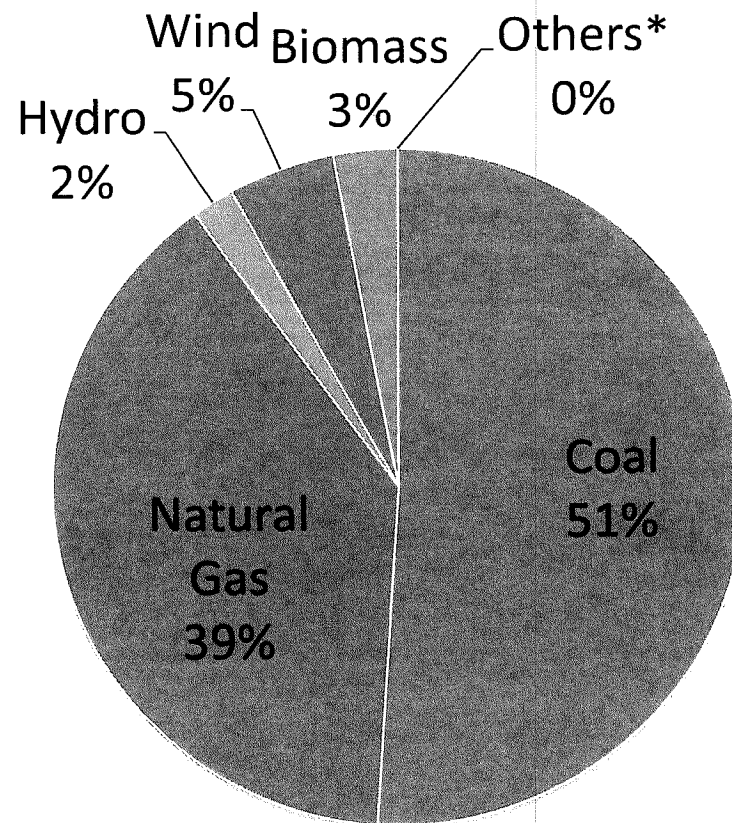
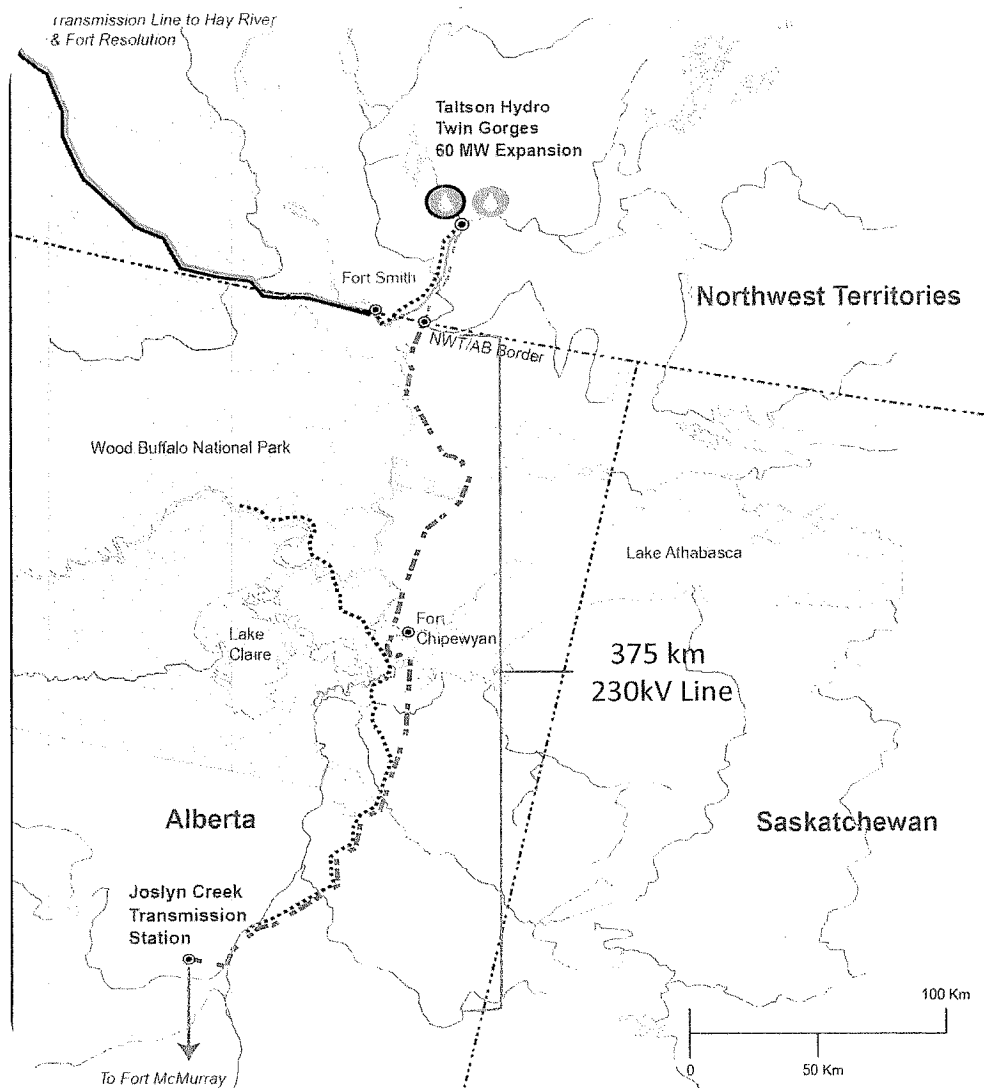
Taltson Costs & Saskatchewan Intertie

Capital Costs	\$/Millions	
60 MW Power Plant (\$8.3– 10M/MW)	500	600
230 kV NWT Transmission Line (95km)	130	130
TOTAL NWT PROJECT COSTS	630	730
230 kV SK Transmission Line	~160	~350
TOTAL COSTS	790	1,080

Energy Production

- 440,000 MWh average energy exports available - 34 year hydrology record

Alberta Market



Alberta - Generation Share By Fuel

Source: AESO - Dec. 2015

Taltson Costs & Alberta Intertie

Capital Costs	\$ / Millions	
60 MW Power Plant	500	600
230 kV NWT Transmission Line (35 km)	40	50
TOTAL NWT PROJECT COSTS	540	650
230 kV Alberta Transmission Line (375km)	~400	~450
TOTAL COSTS	940	1,100

Energy Production

- 440,000 MWh average energy exports available - 34 year hydrology record

Project Benefits

NT Benefits

- Leverage past investments & get to market in 5-10 years
- Stabilize NWT electricity costs & reduce GHG emissions
- Establish long term energy market for Hydro power
- Foster sustainable resource development

Southern Jurisdictions

- Access to competitively priced, firm energy
- Establish northern energy corridor through resource rich areas
 - Hydro resources
 - Mineral resources
- Leverage federal support to displace coal generation

Summary & Next Steps

- **Substantial work complete for Taltson Expansion**
 - Power plant design - environmental screening / regulatory requirements
- **Detailed Power Generation Capital Costs updated to 2017: 500-600 Million**
- **Total Project Costs – \$790-1,100 Million depending on Market**
- **Taltson Expansion: GNWT priority identified with federal government - Pan Canadian Framework**
- **Alberta & Saskatchewan: T-Line Design / Right of Way / Environmental screening undefined**
- **Next steps – continue to define market opportunities**

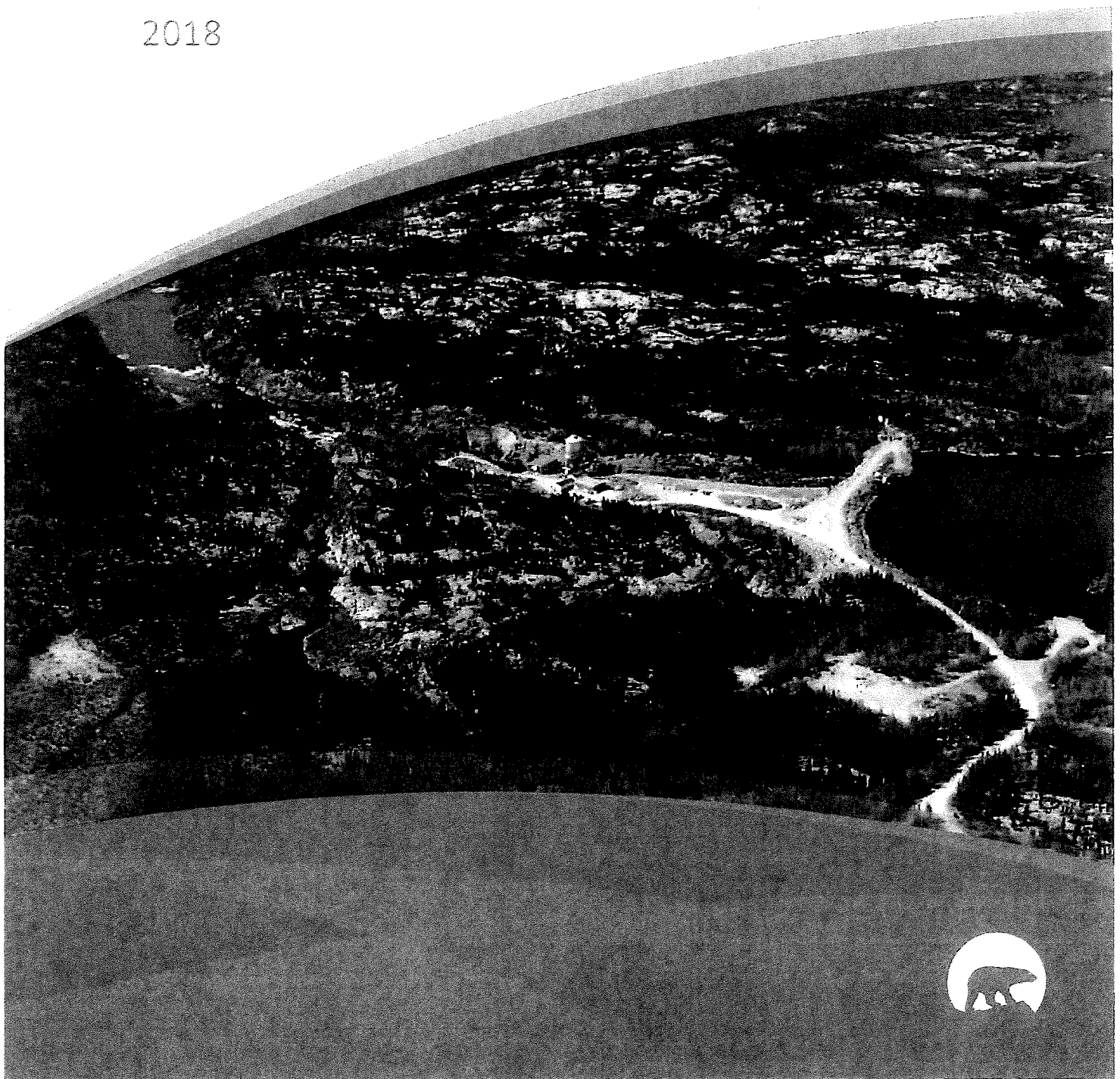
Government of
Northwest Territories

CONNECTING TO OPPORTUNITIES

THE TALTSON EXPANSION PROJECT

POWERING OPPORTUNITY, PROSPERITY &
ENVIRONMENTAL STEWARDSHIP

2018





The Taltson Expansion Project is a transformative hydroelectric generation and transmission project in the Northwest Territories (NWT) that will provide cheaper, cleaner energy to NWT residents and industry and provide the foundation for sustainable, future prosperity in the region.

In its initial phase, the project will add 60 megawatts (MW) of clean hydroelectricity to the Taltson hydroelectric system near Fort Smith and link it to the Snare hydroelectric system near Yellowknife through a High Voltage Direct Current (HVDC) submarine cable across Great Slave Lake. A further 55 MW could be brought online in phase two to produce 115 MW of new generation. Ultimately, 200 MW of hydro power could be developed on the Taltson River. The project represents an exciting first phase of a territorial agenda to foster a clean growth economy in the NWT. This proposal summary describes the Taltson Expansion Project in greater detail and outlines how it represents a generational opportunity to make meaningful progress on reducing GHG emissions in one of the most challenging natural environments in the world, while at the same time improving the competitiveness and environmental performance of the NWT's mining industry.

The project is being advanced as a partnership between the Government of the Northwest Territories (GNWT), impacted NWT Indigenous governments and the federal government. In order to help achieve our mutual goals of fighting climate change and meaningful Indigenous reconciliation, the

GNWT is seeking a financial investment of \$18 million over three years from the Government of Canada to support detailed planning and preparation for the Taltson Expansion. This investment by the federal government will help advance the project to an environmental assessment process and construction decision and will build on the \$18 million of engineering work on the Taltson hydro facility expansion already undertaken by the GNWT.





The Benefits

The numerous benefits of the Taltson Expansion Project include:

- Significant reductions in greenhouse gas (GHG) emissions by displacing diesel electrical generation with clean hydroelectricity. The project is key to achieving the NWT's GHG reduction commitments under the *2030 NWT Climate Change Strategic Framework*. The project would contribute 227 kilotonnes (kt) towards the NWT's target reduction of 517 kt annually by 2030.
- Improving energy stability and security through the construction of a transmission line connecting the Snare to the Taltson hydro system. The transmission line would increase stability as excess hydro generation would be available from Taltson to backstop the Snare hydro system during times of peak demand, scheduled maintenance, unplanned outages or reduced capacity caused by cyclical drought in the region.
- Advancing economic Indigenous reconciliation through deep Indigenous participation in the project during its design and construction phases, through to potential equity partnerships.
- Fueling the clean technology sector by extracting essential minerals found in the NWT such as lithium, cobalt and rare earths in the most environmentally-sustainable way possible.
- Reducing the cost of doing business and living in the NWT. Replacing expensive, imported fossil fuel products such as diesel fuel with more affordable domestically-produced hydroelectricity to light our homes and power our industries will produce a total cost of service reduction of \$1.25 million or an estimated 1 percent reduction in consumer rates.
- Applying innovative techniques in environmental stewardship through the deployment of Canada's first High Voltage Direct Current (HVDC) submarine cable in fresh water and the use of "run of river" technology that will cause no additional flooding.
- Promoting economic development by improving the economic competitiveness of the NWT mining industry while significantly reducing its carbon footprint.

Additionally, support for the planning phase of the Taltson Expansion Project has the potential to produce a ready-made, commercially viable and environmentally progressive signature project in northern Canada for consideration by the newly-formed Canada Infrastructure Bank.



Project Elements

The initial planning phase of the Taltson Expansion Project has five key elements.

Indigenous Partnerships

Partnerships with impacted indigenous governments are an essential element of the project. Indigenous government partners will be integral members, with full participation in contract negotiations with customers and financiers. Indigenous partners will also participate in technical work, particularly with a strong presence in field work for gathering engineering and regulatory baseline information. A process will be established with partners to establish funding and capacity building in areas to increase active participation in the project.

Commercial Arrangements and Business Case

The commercial arrangements for the project will include the financing side of the project and the customer side of the project. Beyond these external arrangements, internal plans will be made for project management through construction, operations and maintenance of the assets once constructed. Initial steps will include setting up business model frameworks, and establishing networks on the customer and financing side. As information is further developed, the business model framework will be advanced into a full business case. This will form the technical basis for commercial discussions and contracts.

Transmission Line Engineering

An earlier vision for the Taltson project foresaw transmission routing around the East Arm of Great Slave Lake. That area is now set to become Thaidene Néné National Park, and as such is no longer a suitable transmission route. The shortest route for transmission will be across Great Slave Lake. This routing will require significant study and will likely necessitate submarine cable installation with HVDC. Survey work (including lake bathymetry) is required, as well as new engineering work on the routing and HVDC line.

Hydro Generation Engineering

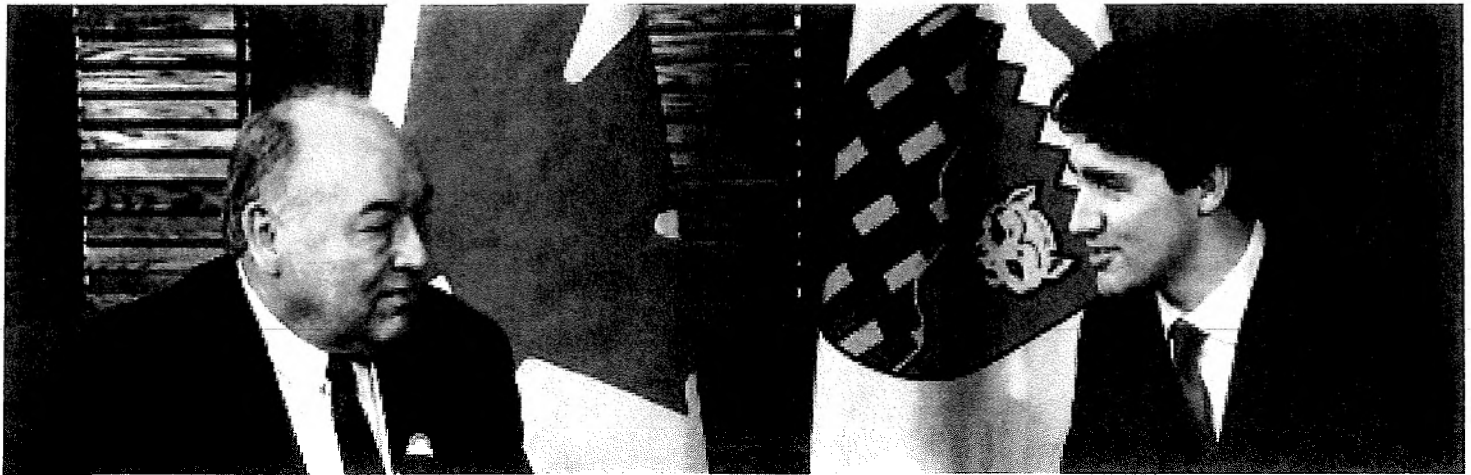
The GNWT has already invested \$18 million in engineering and other related work that will require some updating to ensure the design incorporates the current best practices and meets requirements. A critical logistics study will be performed on the winter access road that will be required to build the project.



Regulatory/Environmental Engagement

The GNWT has invested in baseline environmental work on the Taltson watershed and power generation facility, with some updates required. New work is required on the transmission line including routing and technology options. This will include community engagement to ensure strong local support for the generation and transmission components of the project. Other environmental and socio-economic studies will begin with desktop work, progressing to field work. The culmination of this work is a type A water license and land use application to the Mackenzie Valley Land and Water Board, expected to be made at the end of the third year.





Partners for Environment, Economy & Reconciliation

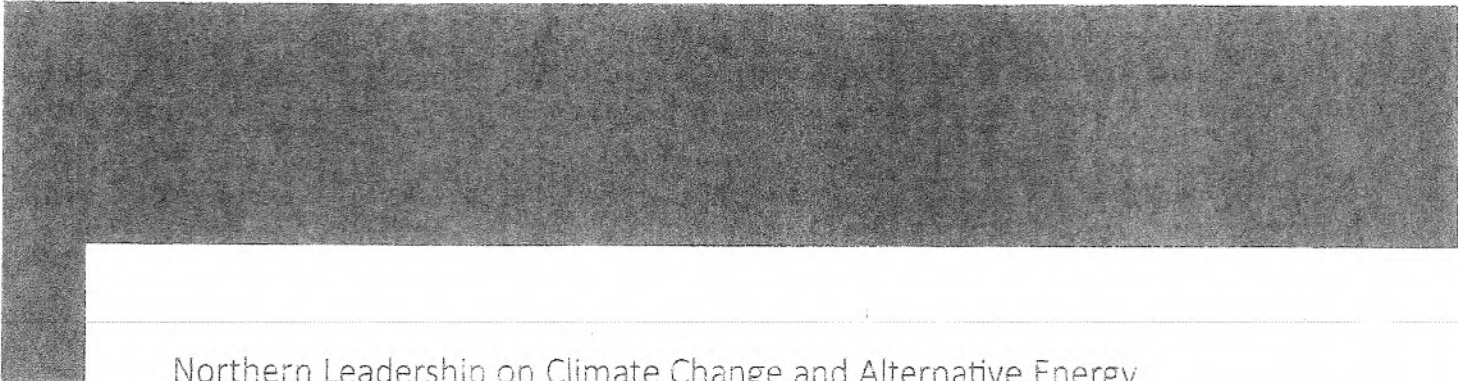
The initial planning phase of the Taltson Expansion Project has five key elements.

The Taltson Expansion Project is more than just a hydro electricity and transmission project. It represents a key element of our vision for a cleaner, less carbon-intensive economy, the creation of good, family-supporting middle class jobs, and an opportunity to continue our journey of economic reconciliation with northern Indigenous peoples – goals that are shared between the governments of the Northwest Territories and Canada and which can be achieved by working together as committed partners.

Since 2015, Canada has re-emerged as an international leader in the fight against climate change, bringing the country together under the *Pan-Canadian Framework on Clean Growth and Climate Change*, and leading the charge to achieve international commitment and endorsement of the Paris Agreement. The GNWT is proud to support the federal government both domestically and internationally in these efforts.

Under the 2015 Paris Agreement, Canada committed to reduce GHG emissions by 30 percent below the 2005 level by 2030. The GNWT's *2030 NWT Climate Change Strategic Framework* commits to reducing NWT emissions proportionally.

The federal government has been a key partner in the development of the NWT through historic investments in critical infrastructure, such as the Snare and Taltson hydro electric facilities. The Taltson Expansion Project represents a new opportunity for the Government of Canada to take up the mantle of nation building in the North by contributing not only to this initial planning phase but also over the longer-term through a variety of financial instruments such as the newly formed Canada Infrastructure Bank, backstopped debt or loan guarantees, should the GNWT decide to proceed to the construction phase.



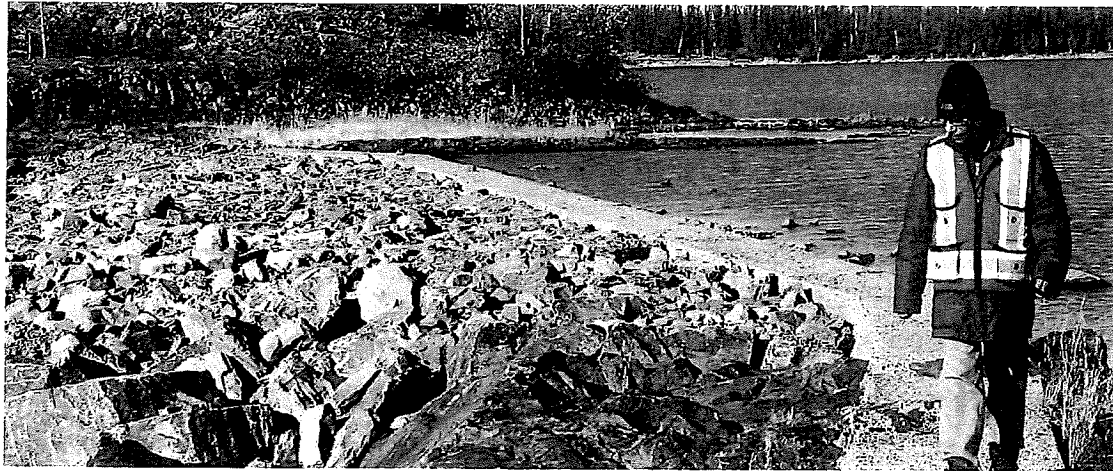
Northern Leadership on Climate Change and Alternative Energy

Northerners experience the impacts of climate change more acutely than our fellow citizens in southern Canada and these have serious implications for the health and safety of our residents, our culture and heritage, our infrastructure and the viability of certain economic activities. This has driven the GNWT to become a leader in addressing the causes and effects of climate change in one of the most challenging natural environments in the world.

The GNWT's *2030 Energy Strategy and the 2030 NWT Climate Change Strategic Framework*, both released in May 2018, provide the policy basis for moving the territory forward to reduce greenhouse gas emissions in support of the *Pan-Canadian Framework on Clean Growth and Climate Change*. Through rolling action plans, supported by bi-lateral agreements with Canada, we will do our part; we will build on past work and guide the implementation of key programs and initiatives over the next three years. The action plans are intended to deliver a 30% GHG emission reduction by 2030 and include the benefits of using the Taltson Expansion Project to reduce diesel electricity emissions at remote mine sites. The GNWT has a proven track record on energy and climate change initiatives to build upon.

Despite our long, cold and dark winters, the NWT is home to more than 850 kilowatts of installed solar electricity. Our jurisdiction is second in Canada in terms of installed solar per person. We have become solar leaders through innovative projects like the one in Colville Lake. This project is the first of its kind in Canada and combines high-penetration solar technology integrated with a new diesel electricity plant and battery storage, which has reduced GHG emissions from the community by 25 percent.

The GNWT also understands the importance of diversifying the energy mix to tackle climate change. That is why we are investing in a megawatt-sized wind turbine to power the community of Inuvik, which will save 1.3 million litres of diesel fuel per year and reduce fuel use by 20 percent in the largest diesel powered community. We recognize the critical roles that energy efficiency and community-based initiatives play in reducing GHG emissions. That is why we make millions of dollars available each year to the Arctic Energy Alliance – an organization that delivers programs to make it easier for residents, businesses and communities to invest in energy efficiency and renewable energy solutions.



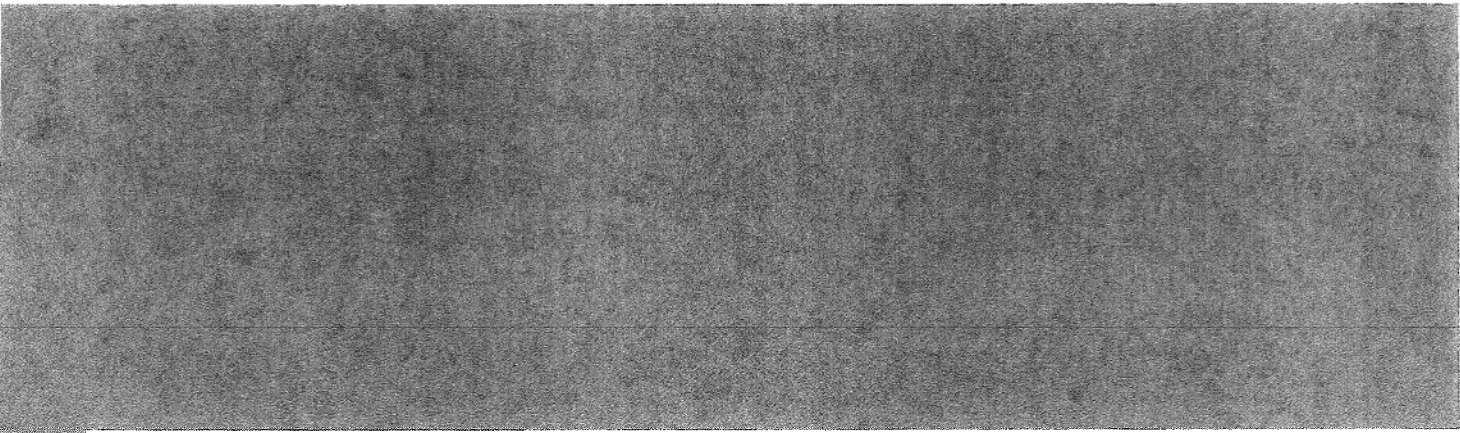
Partnering for Indigenous Economic Reconciliation

The GNWT has some of Canada's strongest procurement policies in support of Indigenous business, and a clear policy to offer partnership opportunities to Indigenous governments when major hydro generation projects are located on Indigenous-owned or traditional lands. For example, the Snare Cascades hydroelectricity plant, a key piece of the Snare system, is owned by a subsidiary of the Tłıchǫ Investment Corporation and leased to the Northwest Territories Hydro Corporation.

Partnering with Indigenous governments to advance the Taltson Expansion Project is essential for meaningful economic reconciliation. The GNWT has identified the Akaitcho Territory Government, the Northwest Territory Métis Nation, and the Salt River First Nation as potential equity partners in an expanded hydro system, given that the project will be developed in their traditional territories.

Partnering with Indigenous governments to advance this transformative project will have far-reaching benefits, well beyond the many important training and job opportunities that will be created. Incorporating Indigenous rights, knowledge and cultural values into project design and implementation will help create prosperity and sustainable livelihoods. Indigenous governments' equity partnership in the Taltson Expansion Project is an integral component of the project. This Indigenous ownership would create many long term benefits particularly as new power customers come on stream.





Powering Opportunity, Prosperity & Environmental Stewardship

The Taltson Expansion Project is expected to reduce territorial emissions by an additional 227kt on top of the 290kt already identified in *2030 Energy Strategy and the NWT Climate Change Strategic Framework*. Achieving these deep reductions in GHG emissions while also providing for economic development opportunities and the deployment of innovative technology in the face of two territorial realities is what makes the Taltson Expansion Project truly transformative.

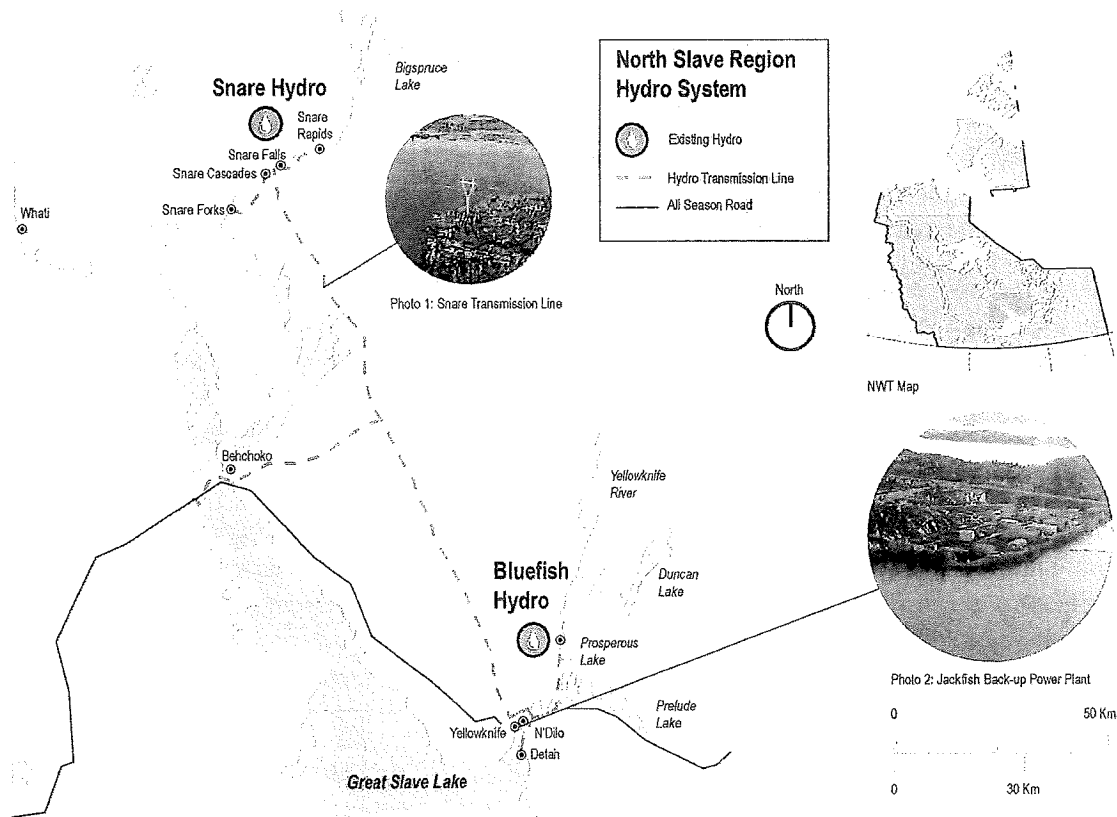
The first of these territorial realities is our geography. The NWT is home to 33 communities spread over a land area of approximately 1,144,000 km². To be safe and comfortable in our northern climate northerners require more energy than do our southern neighbors. Energy is required to heat and light homes and businesses, to transport people and goods over great distances, and to power industries. Despite our leadership in the deployment of alternative energy, the NWT remains very dependent on imported fossil fuels such as diesel and gasoline.

The second is our economic reality. The backbone of the NWT's economy is the mining sector, despite a serious linear infrastructure deficit in the territory, with minimal road, electrical transmission and communication corridors available to assist in the sustainable development of the economy. All of the active mine sites and prospective mines are dependent on diesel fuels to produce power to heat and mobilize their operations. In 2016, almost half (800 kt) of the territorial emissions came from industrial emitters.

Connecting the Taltson and Snare hydro systems and expanding Taltson's capacity will provide cheaper, cleaner energy for 70 per cent of our residents and businesses and lay the foundations for greening current and future mining developments.

There are currently two separate hydroelectric systems in the NWT with a total of 55.5 MW of capacity. The GNWT has a long-term vision that builds on this legacy infrastructure while looking towards a less carbon intensive energy future.

The first federally-commissioned hydroelectric development in the NWT occurred in 1948 when the federal government commissioned the Snare Rapids plant to supply base load power to the Giant Gold Mine and the city of Yellowknife. Since then five additional hydro plants have been brought on stream to support regional population growth and growth in the mining sector. The original Snare Rapids plant and the additional plants form the Snare Hydroelectric system (37.5 MW) that today provides power to Yellowknife, Ndilo, Behchoko and Detah.

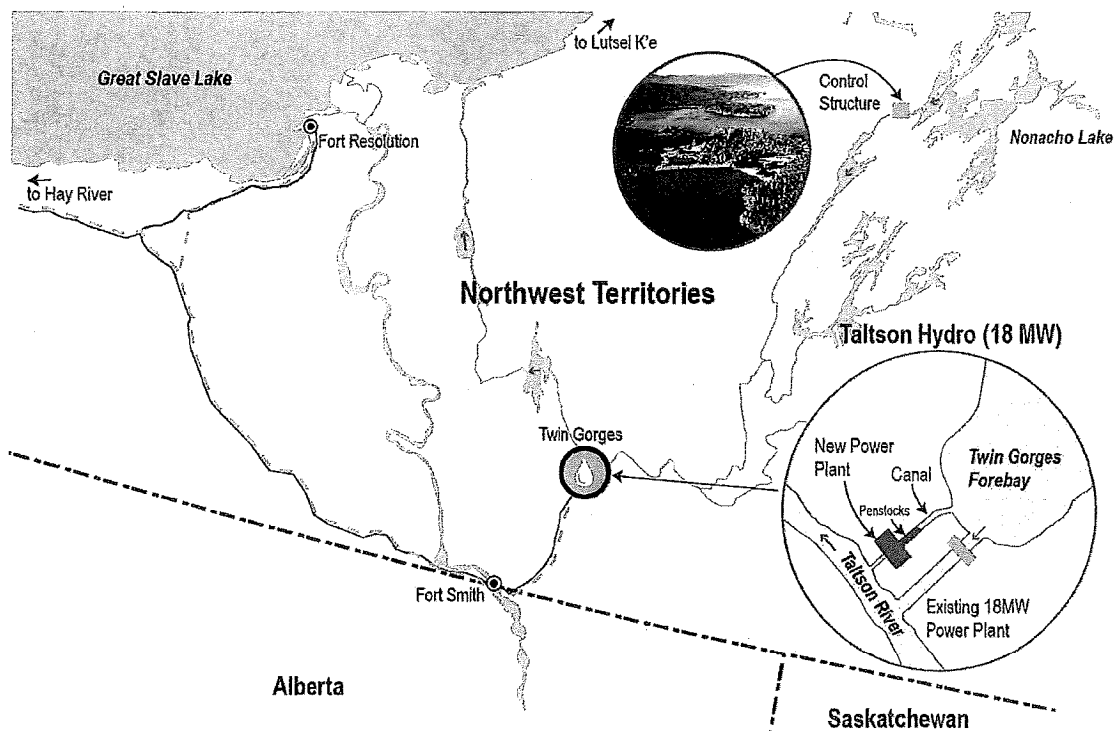


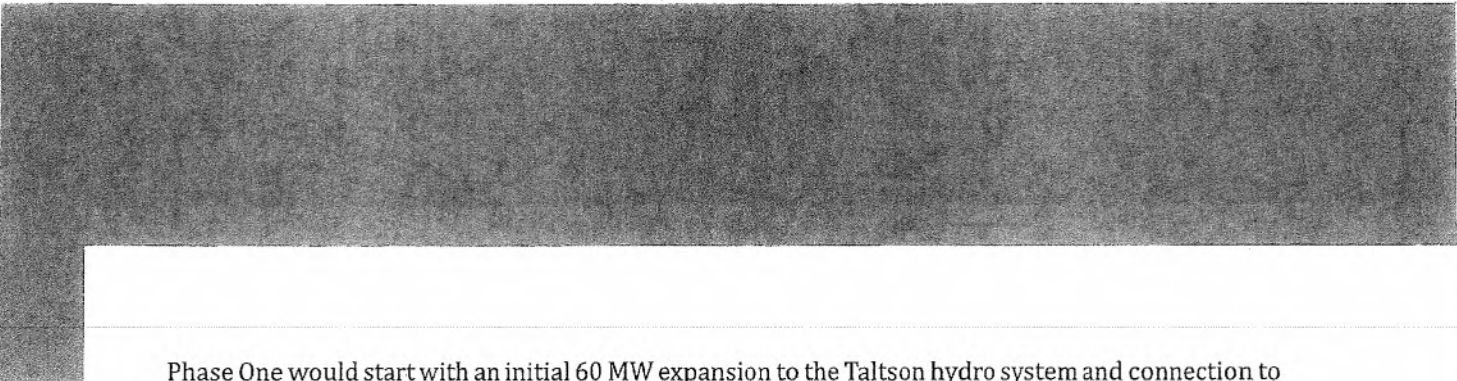
Unfortunately, the Snare hydro system is affected by cyclical droughts. From 2014 to 2016, hydroelectric generation in the region was reduced by low water, requiring 23,000 people and the businesses that serve them to increase their reliance on carbon intensive diesel fuel by 30 percent. Over this three-year period, the drought resulted in the use of 31.8 million litres of diesel fuel because there was no other available option to generate the electricity that our residents and businesses depend on. In addition to the environmental costs associated with this use of diesel power, there

were significant financial costs. As northerners already have the some of the highest costs of living, including electricity rates, the territorial government bore the additional cost of \$29 million to avoid the dramatic price increases that would have otherwise been borne by consumers.

The Taltson hydroelectric system is located in the southeastern NWT on the Taltson River. Taltson was commissioned by the federal government in 1965 to provide power to the Pine Point Mine and today generates 18 MW of electricity, which is relied upon by the communities of Fort Smith, Hay River, the Hay River Reserve, Fort Resolution and Enterprise. The strategic location of this asset on the Taltson River represents a generational opportunity to reshape the energy future of the NWT.

The Taltson system has 200 MW of undeveloped hydroelectric power that could be harnessed in a phased-in approach. All phases would be accomplished using "run of river" technology, without the need for flooding.





Phase One would start with an initial 60 MW expansion to the Taltson hydro system and connection to the Snare hydro system. This electrical intertie would create a stable, drought resistant and accessible power source for 10 territorial communities (comprising over 70 percent of the NWT population) and set the stage for existing and future mineral resource development projects to connect to an emission-free power source.

As new loads emerge and a southern interconnection advances, two additional sites on the Taltson River could add new capacity of 115 MW and an additional four hydro sites could be added thereafter providing 200 MW of total capacity without any additional flooding.

Connecting the Snare and Taltson hydroelectric systems in an environmentally sustainable way will require innovation. The joint creation of the Thaidene Néné National Park Reserve by the Government of Canada, the GNWT and the Łutsël K'e Dene First Nation (ŁKDFN) is a major accomplishment in conservation. The proposed protected area lies in the path of what had been considered the most cost effective transmission line route to connect the hydro grid to remote mines in the Slave Geological Province.

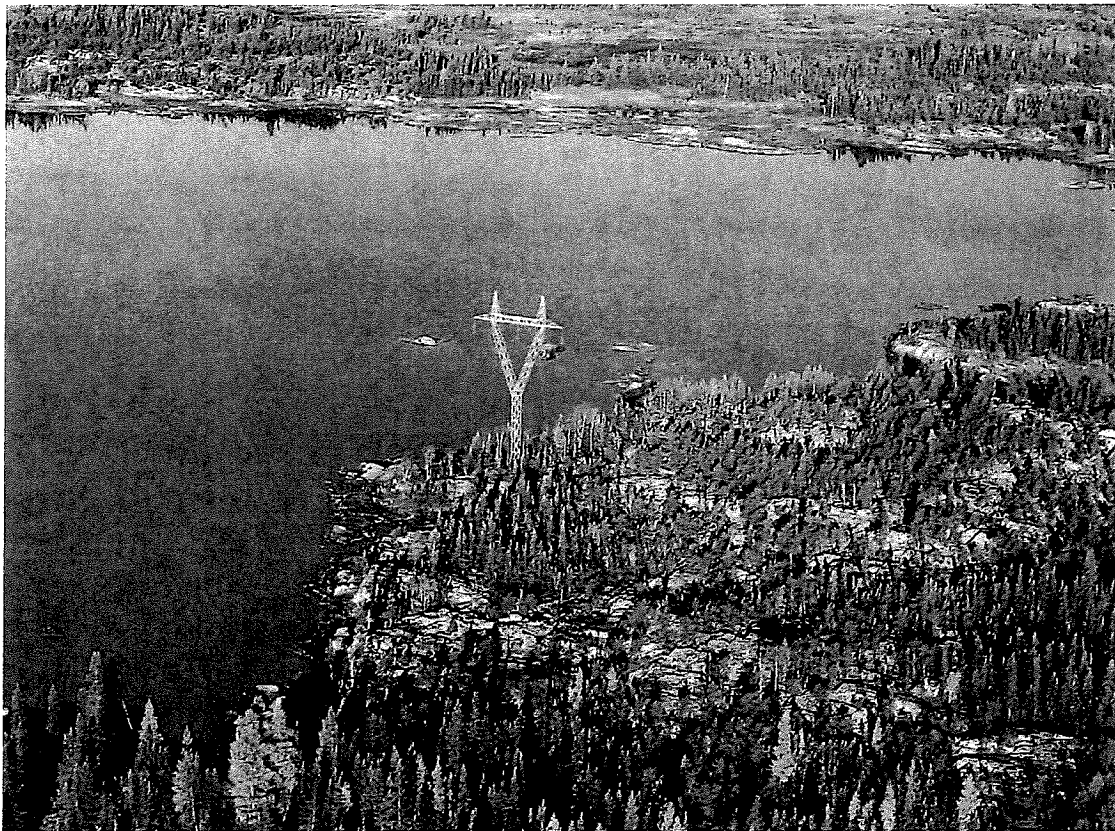
To avoid disturbing this important protected area, a shorter less invasive option to link the Snare and Taltson hydro systems is to lay a HVDC submarine cable across Great Slave Lake. Such a connection would protect Thaidene Néné from the impacts of building and maintaining a transmission line. A trans-island route across Great Slave Lake will also be investigated.

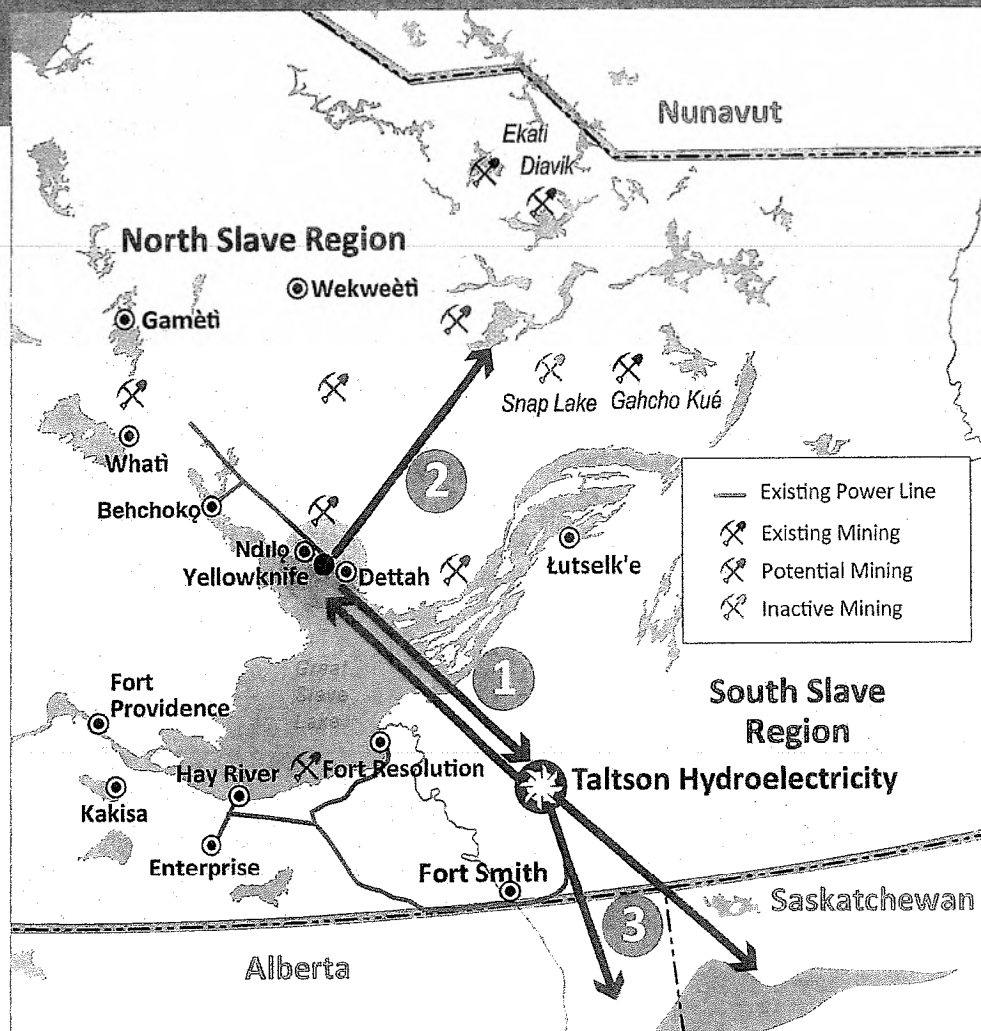
Connecting the Snare and Taltson electrical grids will allow Yellowknife, Ndilo, Detah and Behchokò to end their dependence on diesel power for peak loads and during times of cyclical drought when there is not enough water in the Snare system to run the hydro facility, saving approximately 10 kt of emissions annually. Further connecting industry in the mineral rich Slave Geological Province to the hydro grid will secure a clean power source that could significantly reduce emissions from 800 kt to just 445 kt.

The expansion of Taltson and its connection to the Snare to create a single NWT hydroelectric grid would allow territorial mining operations to dramatically reduce their emissions by converting remote diesel power generation to clean hydro power. This will eliminate fuel price risk, reduce fuel haul traffic on winter roads, reduce operating costs and provide infrastructure that could support zero-emission heavy equipment and long haul trucking technology conversion in the NWT that could ultimately extend mine life. Over the longer term, after the Taltson and Snare systems are connected, a transmission line south to the North American grid will provide clean energy security to the NWT and partner provinces for generations to come.

In addition to providing a more secure and clean energy source, the reduction of the reliance on diesel fuel will have the added benefit of reducing the costs of power throughout the territory, thereby helping to make the NWT more economically competitive while reducing the high cost of living for residents.

The NWT would also contribute to the global fight against climate change through emission reductions and through our vast mineral endowment. Many of the emerging mining opportunities are focused on specific mineral deposits such as lithium, cobalt and rare earths that are used in battery storage and electronics, critical to the clean growth economy. The GNWT would like as many of these future mines as possible to have access to clean, affordable hydroelectric power.





1

Connect legacy hydro to add green capacity.

2

Partner to provide clean energy to the resource economy.

3

Build an inter-tie to connect the North with southern Canada.

The GNWT has invested over \$18 million to date to advance the generation and transmission potential of the Taltson. Engineering design is complete for a 60 MW power plant to be built at Twin Gorges next to the existing Taltson facility. Much of the engineering, design and environmental baseline work related to the Taltson River watershed, water management and power generation components is done but requires updating. Transmission related design and routing will be new.

The Government of Canada's help is needed to take this vision of a cleaner, more prosperous NWT to the next level of critical detail including confirming Indigenous partners, developing commercial agreements and a business case, and extensive engineering work that would eventually inform an environmental assessment and the final decision on whether to proceed with construction.



Turning Vision into Reality: Three Year Implementation Plan & Budget

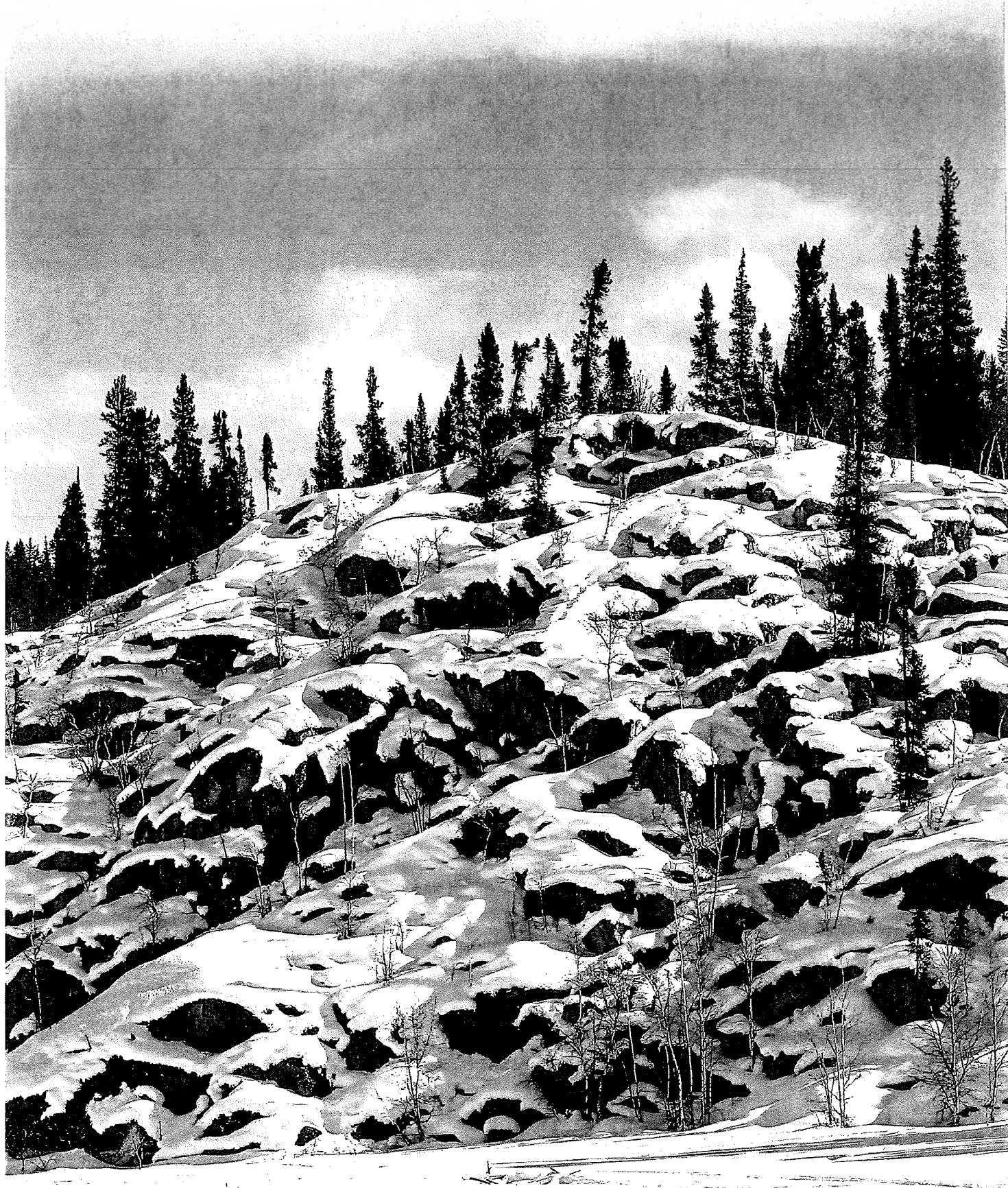
This proposal summary requests Canada's financial support for the work needed to engage with partners and stakeholders, identify electricity markets, research technical details, and complete environmental and regulatory processes. The scope of this project is expected to require three years of planning, development and approvals before a regulatory application can be submitted, followed by a decision to proceed to construction.

A detailed three-year plan has been developed to carry the project through to a construction decision. This includes preparation for necessary approvals and permits, commercial agreements for power, construction contracts as well as a defined business model and partnership arrangement with Indigenous governments.

Successful partnerships are key to developing a project that meets public expectations. To achieve this, early emphasis will be placed on securing and creating strong partnerships with Indigenous governments previously identified to collaboratively develop the partnership model, project impacts and benefits.

All aspects of the expansion will be scoped and planned to ensure that the project will realize both the cost effective delivery of electricity to end users and real GHG reductions for the NWT. Studies will first start by ensuring that new and lower cost technologies are able to meet the system needs, followed by detailed routing studies, and by system design. This will culminate in the development of bid packages. The existing hydro expansion work will need to be reviewed to determine what might be optimized based on current market offerings, and then engineered into bid packages. There will also be some hydro engineering work to understand the future hydro expansion phases.

Environmental field work and regulatory work will start with desktop work, and as transmission routing is determined, will shift into field work on the transmission line as well as updates to the work already done for the hydro expansion. A project application for environmental assessment will be made at the end of the third year. A stakeholder engagement process will also take place to confirm support for the project prior to entering the environmental assessment process.





Budget

It is estimated that \$15 million is required over three years to undertake the technical and feasibility studies and launch the environmental assessment process, with a further \$3 million over three years needed for Indigenous partners' capacity to participate in the development and formalizing of the investment relationship and project development overall. The overall cost for this preparatory phase is estimated to be \$18 million over three years.

Technical and Commercial

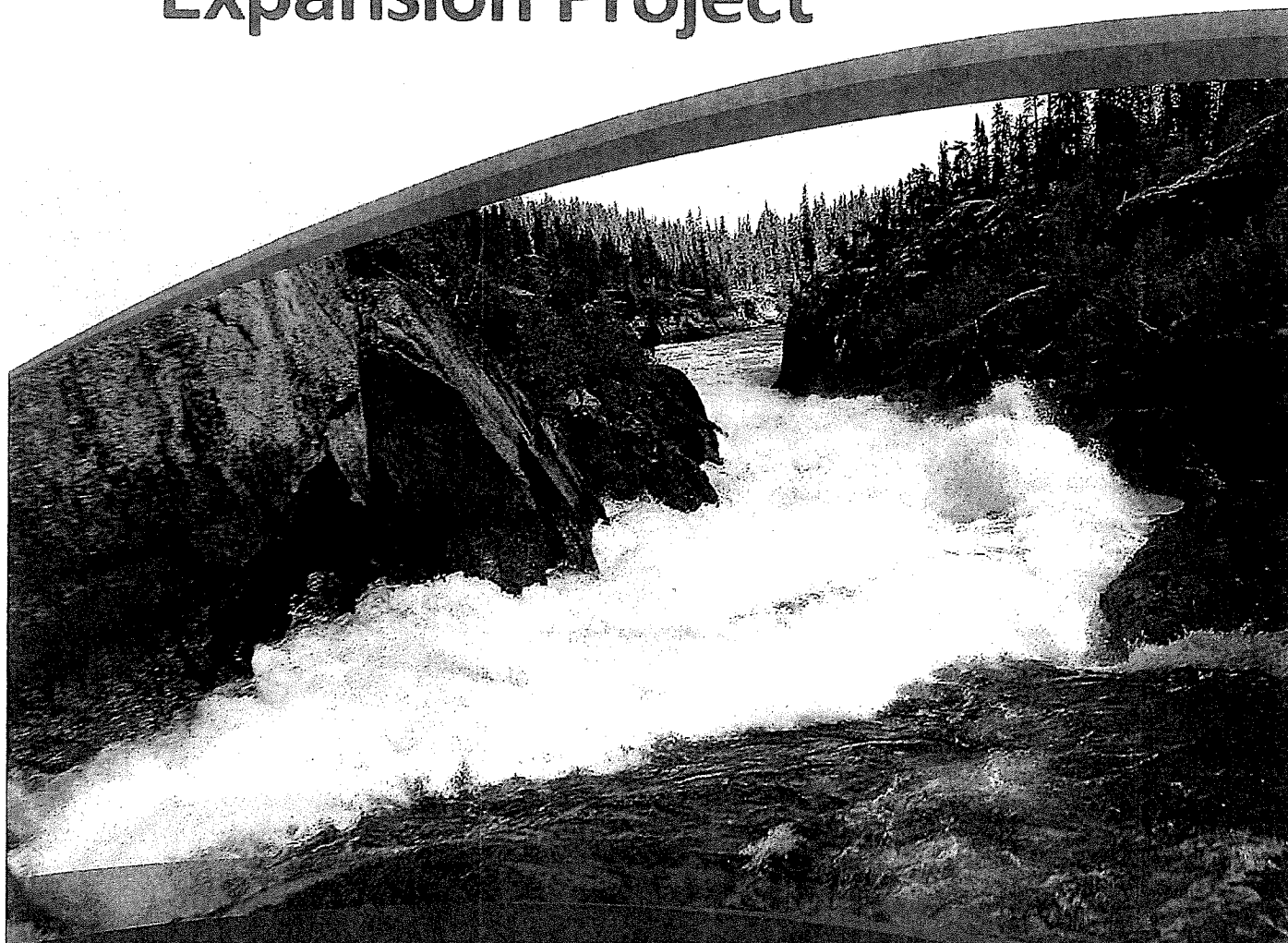
	2018/19	2019/20	2020/21	2021/22	Cost
Commercial Arrangements and Business Case	Establish Market for Electricity	Establish business case framework. Begin commercial engagement, Establish potential sales and finance structures	Create project financial model. Initiate MOU Level discussions with customers and financiers. Project delivery model created.	Finalize business case. Define Customer contracts and firm sources of financing. Develop operations model.	\$2 million
Transmission Engineering	Study Great Slave Lake Submarine cable and feasibility of HVDC	Electrical System Studies, bathymetry Study, LIDAR and general Routing.	Preliminary design and detailed field work	Final Design & Bid Packages	\$4.35 million
Hydro Engineering		Study winter construction access, review future potential phases	Review existing design and refine to current best practice	Final Design & Bid Packages	\$3.3 million
Regulatory/ Environmental / Stakeholder and Permitting	Prepare Community Engagement Plan	Desktop Work, literature review, initiate community engagement process	Baseline data collection program. Includes field program, enviro, archeo, TK/TLU as well as ongoing engagement	Continue engagement and complete Field work, prepare and file regulatory applications	\$5.35 million
Total Contribution (Technical & Commercial)					\$15 million

Partnership

	2018/19	2019/20	2020/21	2021/22	Cost
Partnership	Initiate plan for partnership with local Indigenous groups	Create Partnership Model and Capacity Building Plan with proposed partners	Sign partnership and capacity building agreements	Partnership and Participation	\$3 million
Total Overall Contribution					\$18 million

CONNECTING TO OPPORTUNITIES

Taltson Hydroelectricity Expansion Project



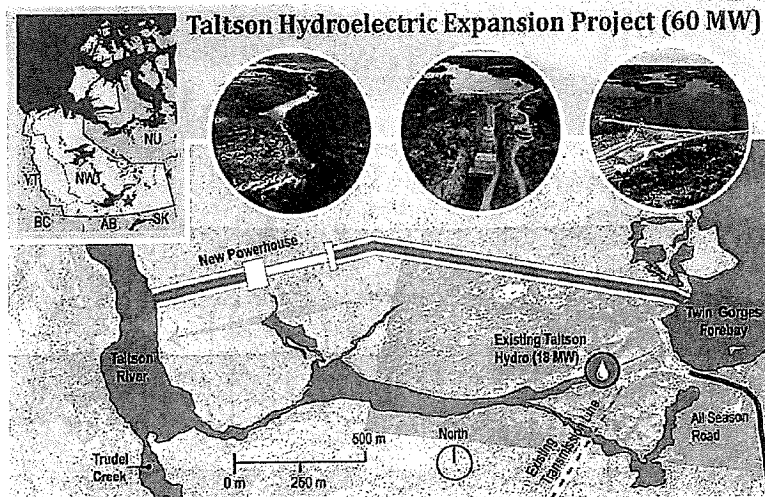
The Taltson Hydro Expansion is the foundation for a green energy corridor that will transition the North's resource economy from relying on diesel-generated electricity to clean hydroelectricity. Initially, Taltson will connect our islanded hydrosystems and will eventually connect the North to the rest of Canada.

Government of
Northwest Territories



CONNECTING TO OPPORTUNITIES

The 60MW Taltson Hydro Expansion could remove 240,000 tonnes of GHG emissions per year in Canada, stabilizing electricity rates and providing clean hydroelectricity to northern resource development that relies on diesel generation. The Taltson Expansion and the Slave Geological Province Access Corridor are part of the NWT's plan to connect a green energy corridor to the rest of Canada.



PROJECT HIGHLIGHTS

- The project would provide 60MW of hydro on a developed river with power generation within five to 10 years.
- The project would be co-located with an existing run-of-river facility and would require no flooding.
- By 2040 an additional 55MW could be developed for a total expansion of 115 MW.
- The Taltson River system could support a total generation capacity of 200 MW.

CURRENT STATUS

- Power generation project is well understood from engineering, power production and environmental perspective.
- Discussions with northern industry and southern market are underway to define electricity markets and project timing.
- Progress on the proposed Thaidene Nëné National Park Reserve has necessitated a review of higher cost transmission routing options across Great Slave Lake.
- Next steps include working with northern industry and investigating emerging technologies that could improve the cost effectiveness of crossing Great Slave Lake with a transmission line.

Government of
Northwest Territories





TALTSON HYDRO EXPANSION FACT SHEET

The Taltson River has 200 Megawatts (MW) of potential that could be used to create a green energy corridor, transforming northern industrial diesel loads, displace fossil fuels in southern jurisdictions and remove economic barriers to remote and sustainable resource development. Phase I could deliver 60MW of hydro power by 2030. Future Phases could deliver an additional 140 MW by 2050.

PHASE I – 60 MW HYDRO EXPANSION + TRANSMISSION LINE

TOTAL PROJECT: 950M – \$1.2 Billion

- Engineering design is complete for a 60 MW power plant that could be built next to the existing 18MW Plant on the Taltson River with no new flooding.
- Environmental and regulatory conditions for the generation plant were clearly defined in a 3 year Environmental Assessment (EA) which was halted in 2011.
- 440 Gigawatt hours of energy available based on a 34 year hydrology record of river flow.
- Connecting the North slave and Taltson systems is a near term priority that would help stabilize costs, reduce drought impacts and begin transitioning remote mines to green hydroelectricity.
- \$500 Million Cost for a 60 Megawatt Hydro facility based on advanced engineering.
- Preliminary Transmission Line costs are anticipated to be \$450-700 Million.
- Progress on the proposed Thaidene Nëné National Park Reserve has necessitated a review of higher cost transmission routing options across Great Slave Lake that avoid the park area.
- Next steps include working with northern industry and investigating emerging technologies that could improve the cost effectiveness of crossing Great Slave Lake with a transmission line.

PHASE II – UP TO 140 MW IN HYDRO EXPANSION

TOTAL PROJECT: UP TO 1.4 Billion

- Development of Taltson potential could add up to 140MW of new hydro generation.
- Additional sites have been investigated at a desktop level only.
- By 2040, a total of 115MW could be constructed, with the remainder constructed by 2050.
- Transmission south from Taltson to either Alberta or Saskatchewan would connect the NWT to the rest of Canada.

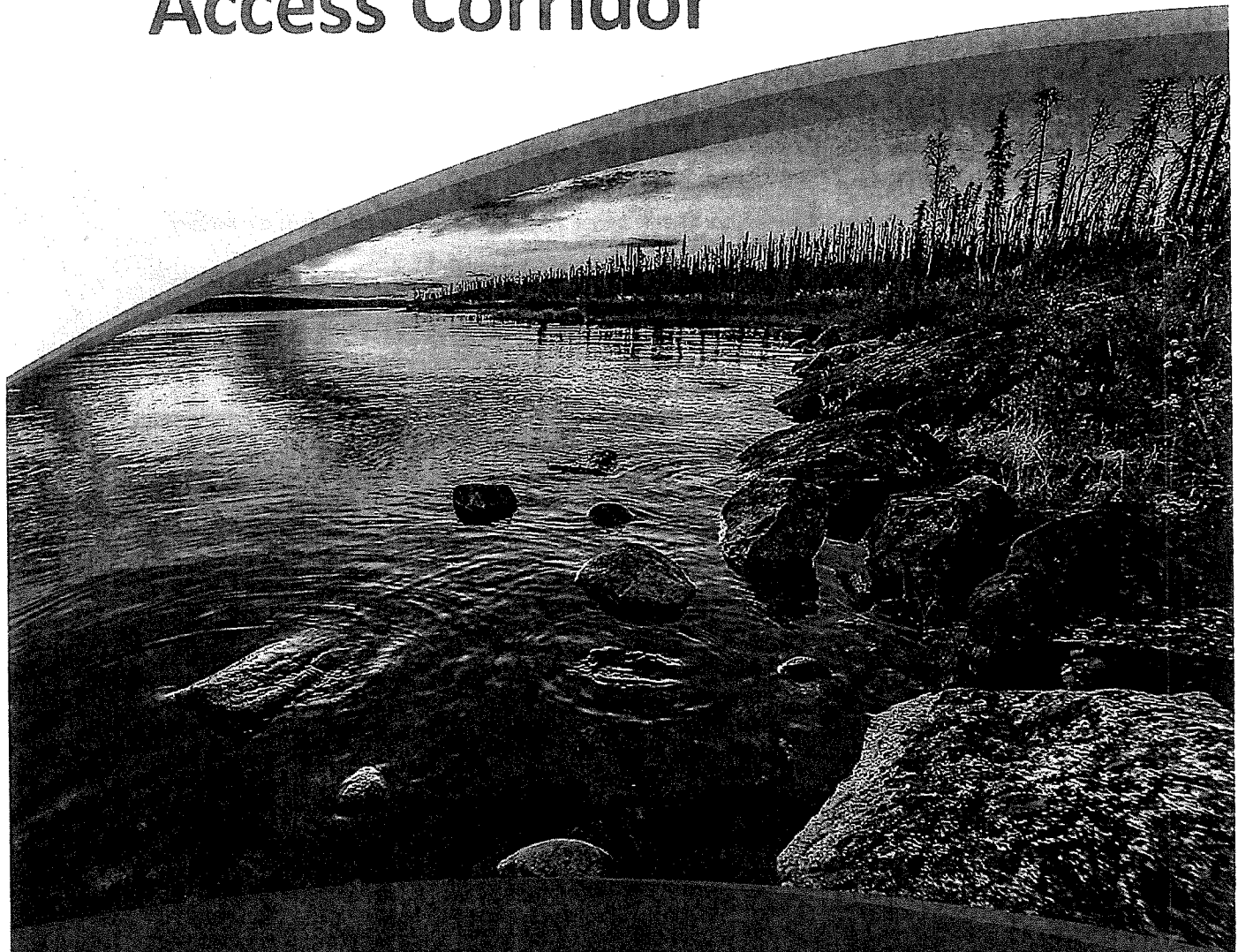
YEAR	Total New Development
2030	60 MW
2040	115 MW
2050	200 MW

ABORIGINAL PARTNERSHIP

- If a viable market and business case for a project can be established, Aboriginal governments will be included in the business structure going forward.

CONNECTING TO OPPORTUNITIES

Slave Geological Province Access Corridor



The Slave Geological Province Access Corridor will support road access, hydro transmission lines and communications infrastructure into areas of significant mineral potential.

Government of
Northwest Territories

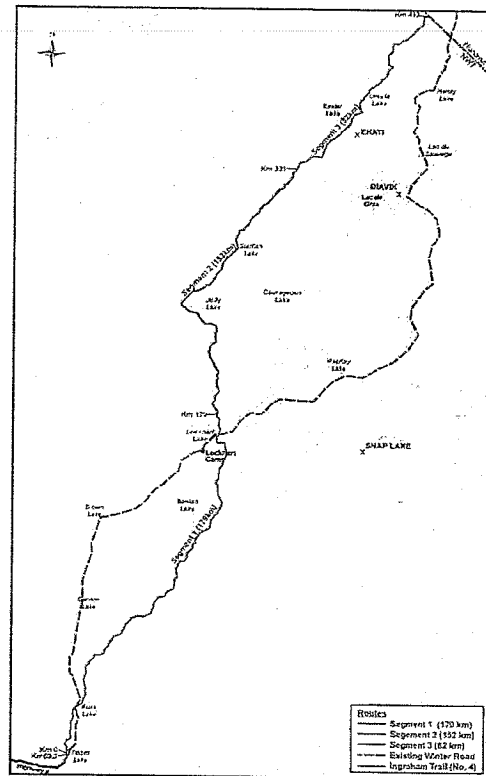


CONNECTING TO OPPORTUNITIES

The Slave Geological Province Access Corridor will provide all-weather access from the end of Northwest Territories Highway 4 east of Yellowknife to the Nunavut Border.

PROJECT HIGHLIGHTS

- The corridor would connect the Slave Geological Province and its vast mineral deposits to points south and ultimately to a deep-water port in Nunavut.
- An all-weather road would adapt to the increasing challenges of climate change by replacing winter roads with more reliable access.
- Improved access would reduce operating costs for existing mines, and facilitate resource exploration and development activities.
- All-weather access would support a green economy by enabling development of the Taltson Hydro Expansion and Transmission Line project. It would also enable the extraction of base and precious metals required for low-carbon technologies.



CURRENT STATUS

- A corridor providing the greatest economic benefit has been chosen based on the results of mineral potential and routing options studies and analysis, and a financing business case analysis is underway.
- On November 6, 2017, the Government of the Northwest Territories submitted a comprehensive proposal to advance the project under Transport Canada's National Trade Corridors Fund.
- Five construction phases have been identified:
 1. Replacement of the Frank Channel Bridge
 2. Environmental Assessment and Planning
 3. Highway 4 to Lockhart Lake
 4. Lockhart to Lac de Gras (diamond mines)
 5. Lac de Gras (diamond mines) to the NWT/Nunavut border
- Next steps include completing a business case assessment, undertaking environmental studies, and finalizing engineering and design work.

Government of
Northwest Territories

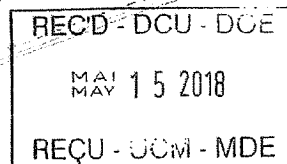
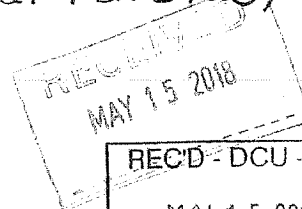




MIN-232586

Government of / Gouvernement des
Northwest Territories / Territoires du Nord-Ouest

(Ref 229721 & 228928)



MAY - 1 2018

MIN(P/T)

The Honourable Catherine McKenna, P.C., M.P.
Minister of Environment and Climate Change
HOUSE OF COMMONS
OTTAWA ON K1A 0A6

Dear Minister McKenna:

The Northwest Territories Taltson Hydroelectricity Expansion Project

In follow up to your meeting on March 28, 2018 with the Honourable Robert C. McLeod, Minister of Environment and Natural Resources for the Northwest Territories (NWT), please find attached a copy of the NWT's 2030 *Energy Strategy*, which describes how the NWT will meet its commitment under the *Pan-Canadian Framework on Clean Growth and Climate Change* (PCF) to reduce greenhouse gas emission by 30% below 2005 levels by 2030. In order to meet this commitment, the NWT must look for transformative ways to address industrial emissions. For the NWT, the most promising option is to expand the Taltson Hydroelectricity site and deliver that sustainable power to industry to reduce fossil fuel use.

Further information regarding the scope of the Taltson Hydro Expansion project, as well as the estimated costs and benefits, can be found in the backgrounder and fact sheet on the project, which are also attached.

Phase 1 of the proposed Taltson expansion would produce 60 Megawatt of green hydroelectricity and would reduce greenhouse gas emissions by as much as 240 kilotonnes from mining operations in the NWT. This represents 46% of the 517 kilotonnes in greenhouse gas reductions required for the NWT to meet its PCF commitment.

It is estimated that the expansion project, as well as transmission to Yellowknife and to industrial users, will require a capital investment of approximately \$800 million to \$1.2 billion, and will require federal support to succeed. This cost is composed of both the hydro project, which is well understood, and the transmission project. Technical work is underway to better define the transmission component.

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All-weather road access would enhance the feasibility of expanding the Taltson hydro system by improving construction access and reducing the cost of building and maintaining a transmission line into the resource rich Slave Geological Province. A corridor supporting both transportation and energy infrastructure through the Slave Geological Province, where most of the NWT's operational mines are located would support the long term growth of the NWT resource sector while contributing to a green economy. A backgrounder on the Government of the Northwest Territories' plans to develop all-weather access into this region of the territory through the construction of the Slave Geological Province Access Corridor is also attached.

I would welcome the opportunity to brief your officials on the status of the Taltson Hydro Expansion as part of our territory's vision to connect our hydro systems, communities and industrial loads.

Thank you for your interest in supporting the NWT's transition to a clean growth economy. Your help to advance this project with your Ministerial colleagues in the Government of Canada will assist in achieving the NWT's targets and vision for energy.

Sincerely,



Wally Schumann
Minister
Infrastructure

Attachments

- c. Distribution List

Distribution List

Mr. Michael McLeod, M.P.
Member for the Northwest Territories

**Members of the Ministerial Energy
and Climate Change Committee-of-Cabinet**

Mr. Gary Bohnet
Principal Secretary
Executive and Indigenous Affairs

Mr. Mike Aumond
Deputy Minister
Executive and Indigenous Affairs

Mr. Paul Guy
Deputy Minister
Infrastructure

Dr. Joe Dragon
Deputy Minister
Environment and Natural Resources

Taltson Transmission Project

Project Description

The Taltson Transmission Project ("the Project") proposes to expand an existing hydroelectric dam northeast of Fort Smith, Northwest Territories, and construct a transmission line connecting to Uranium City, Saskatchewan.

The expansion will increase the capacity of the dam, which is currently 18MW, to its hydrological maximum of 200MW, and tie the Taltson transmission grid into the continental grid. Interconnectivity would add reliability to the NWT grid, provide protection from diesel fuel price volatility, and provide a source of power for load growth or for the sale of surplus generation to southern markets.

Expansion

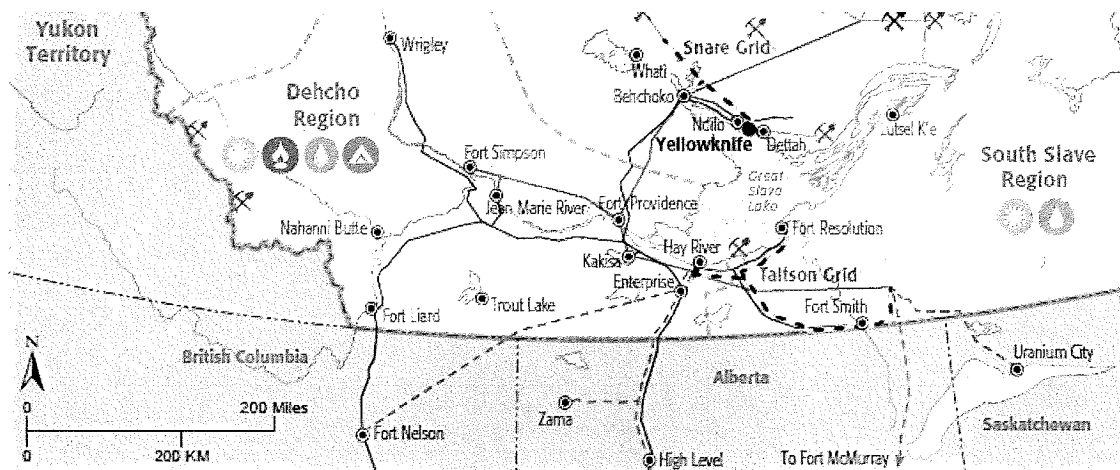
The existing dam located at the Twin Gorges along the Taltson River features a nameplate capacity of 18MW. The expansion will increase the capacity of the dam to its hydrological maximum of 200MW. The reservoir for the dam is identified as Nonacho Lake, however variations in water flow also affects tributaries such as Tronka Chua Lake and the Trudel Creek River system. It is not known at this time the ecological considerations surrounding the Project; however, an environmental review of a previously considered 56MW expansion of the dam determined that although no new flooding would be required, variations caused by "ramping", or relatively sudden hydrological changes in flow rates and water levels from baseline levels and natural conditions, would be detrimental to the surrounding ecology.

Transmission Line

The transmission line, approximately 200km, would tie the Taltson transmission grid into the continental grid, providing a source of power for load growth or for the sale of surplus generation to southern markets, such as Saskatchewan.

The figure below shows the proposed transmission line from the Taltson Dam site to Uranium City, as illustrated in the NWTPC's 20-year power system plan.

Figure 1: Map of Taltson Transmission Project



Page 62
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pursuant to paragraphs
14, 21(1)(a) and 21(1)(b)
of the *Access to Information Act*

Page 62
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conformément aux dispositions des
paragraphes
14, 21(1)(a) et 21(1)(b)
de la loi sur l'accès à l'information

Ministre de l'Environnement et
du Changement climatique



Minister of Environment
and Climate Change

Ottawa, Canada K1A 0H3

JUL 30 2018

The Honourable Wally Schumann, M.L.A.
Minister of Infrastructure
Government of Northwest Territories
P.O. Box 1320
Yellowknife NT X1A 2L9

Dear Minister:

Thank you for your recent letter following up on my meeting with your colleague, the Honourable Robert C. McLeod, Minister of Environment and Natural Resources for the Government of Northwest Territories.

The Government of Canada recognizes the unique circumstances of the North, including disproportionate impacts from climate change and the associated challenges with food security, emerging economies and the high costs of living and of energy. It also recognizes that provinces and territories have been early leaders in the fight against climate change and have taken proactive steps, including renewable energy production through hydroelectric developments.

I appreciate receiving the additional documents that you provided with your letter. I am pleased to see more detail on how the Northwest Territories plan to meet its commitments under the Pan-Canadian Framework on Clean Growth and Climate Change through the recently released 2030 Energy Strategy. I was also pleased to receive more information regarding the Taltson Hydroelectricity Expansion Project, along with the proposal to develop all-weather road access in order to support this work.

The Project was highlighted as a priority area in the Northwest Territories annex of the Pan-Canadian Framework, as were other opportunities related to improving the safety and reliability of winter roads (Geological Province Access Corridor) and reducing reliance on diesel in off-grid communities. Connecting clean power across Canada through stronger transmission-line interconnections will help reduce emissions and lower reliance on diesel fuel.

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EcoLogo® Paper / Papier Eco-Logo®



- 2 -

A number of federal initiatives are being developed to support the North and the development of clean energy projects. One such opportunity is the Canada Infrastructure Bank. Therefore, I encourage you to contact Mr. Pierre Lavallée, President and Chief Executive Officer, Canada Infrastructure Bank, at P.O. Box 15, Toronto ON M5H 1J9.

Furthermore, as this matter falls under the purview of the Minister of Infrastructure and Communities, I am forwarding a copy of our correspondence to the Honourable François-Philippe Champagne, for consideration.

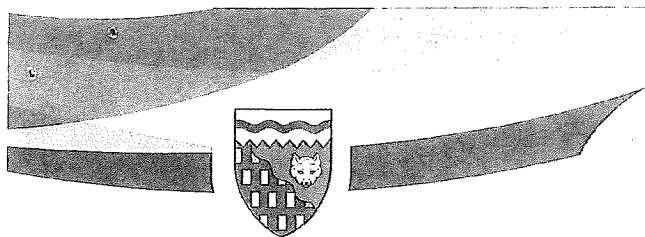
Please accept my best regards.

Sincerely,

A handwritten signature in black ink, appearing to read 'C McKenna', with a stylized flourish at the end.

The Honourable Catherine McKenna, P.C., M.P.

c.c.: The Honourable François-Philippe Champagne, P.C., M.P.



The Right Honourable Justin P.J. Trudeau, P.C., Q.C., M.P.
Prime Minister of Canada
80 Wellington Street
OTTAWA ON K1A 0A2

SEP 12 2018

Dear Prime Minister:

Taltson Expansion Project

The Government and residents of the Northwest Territories share your deep commitment to the fight against climate change and to improve the socio-economic situation of Indigenous peoples through meaningful economic reconciliation. The Government of the Northwest Territories has been a leader in these areas for decades and we welcome the federal government's renewed interest in these important issues since your election in 2015.

As you know, the Northwest Territories (NWT) is a unique jurisdiction where Indigenous and non-Indigenous people live and work together in the same communities in a way that can be an example for the rest of Canada. By working with the Government of the NWT to make transformative investments in the NWT's economy and infrastructure, people and environment, the Government of Canada has an opportunity to achieve its goals of growing the middle class, fostering meaningful reconciliation, protecting the environment and strongly positioning Canada as an Arctic nation. The Taltson Hydroelectricity Expansion Project can advance each of these shared objectives. In my letter to you of November 2016, this project was identified as our top energy priority, and is required if the NWT is to meet its obligations under the Pan Canadian Framework on Clean Growth and Climate Change.

To that end, I am writing to seek Canada's financial support of \$18 million for the work needed to advance the Taltson Hydroelectricity Expansion Project. Our government has already invested \$18 million to assess the generation and transmission potential of the Taltson.

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Canada's financial support will be used, in partnership with NWT Indigenous governments, to help advance the project to final regulatory, business and construction decisions by 2022. Of this funding, \$3 million will be made available to Indigenous governments to enable their participation - to collaboratively structure the partnership, integrate traditional knowledge into the design, build capacity and define local, Indigenous ownership and equity options. Partnerships with impacted Indigenous governments are an essential element of the Project.

The attached proposal summarizes the Taltson Expansion Project and outlines how its development can help achieve our shared goals. It is more than just a hydroelectricity and transmission project. It represents a key element in our vision for a cleaner, less carbon-intensive economy, the creation of good, family-supporting middle class jobs, and an opportunity to continue our journey of economic reconciliation with NWT Indigenous peoples. In short, it will power opportunity in Canada's North by reducing costs for residents and industry alike, and help green the resource sector.

In the coming days, we will reach out to key Ministers in your Cabinet to identify a source and work towards a commitment of funding. I hope we can count on your support in developing this critical foundation for a sustainable economic future for the NWT, and I look forward to discussing this with you.

Sincerely,

Robert R. McLeod
Premier

Attachment

c. Distribution List

Distribution:

Hon. Dominic Leblanc, P.C., M.P., Minister of Intergovernmental and Northern Affairs and Internal Trade

Hon. Bill Morneau, P.C., M.P., Minister of Finance

Hon. Catherine McKenna, P.C., M.P., Minister of Environment and Climate Change Canada

Hon. Amarjeet Sohi, P.C., M.P., Minister of Natural Resources Canada

Hon. François-Philippe Champagne, P.C., M.P., Minister of Infrastructure and Communities

Hon. Navdeep Bains, Minister of Innovation, Science and Economic Development

Hon. Carolyn Bennett, P.C., M.P., Minister of Crown-Indigenous Relations

Mr. Michael McLeod, Member of Parliament, Northwest Territories

Mr. Gary Bohnet, Principal Secretary, Government of the Northwest Territories

Mr. Mike Aumond, Secretary to Cabinet/Deputy Minister, Executive and Indigenous Affairs, Government of the Northwest Territories

Mr. Paul Guy, Deputy Minister, Infrastructure, Government of the Northwest Territories

Ms. Catherine MacQuarrie, Deputy Secretary, Federal Engagement, Government of the Northwest Territories



Taltson Hydroelectricity Expansion Project – Phase I

Expand existing hydro site by 60 Megawatts and connect to the North American grid

Projected Cost: \$700 million to \$995 million

- The proposed Taltson hydro expansion is a small scale run of river hydro project that could be developed with little environmental impact next to the existing power plant, on an already developed river, and combined with a transmission link to provide a green energy corridor to our southern neighbours.
- In the context of the Pan-Canadian Framework on Climate change, the expansion of the Taltson hydro dam would help reduce Canada's greenhouse gas emissions by 360,000 tonnes annually for 50-plus years.
- This expansion would rely on existing water storage with no new flooding to generate revenue for the next 50 years or more.
- The Government of the Northwest Territories is currently in discussion with potential inter-provincial electricity buyers. If a buyer is secured, construction could begin by 2019-20, with the project online by 2022-23.
- The nation-building project would connect the renewable energy system of the Northwest Territories to the continental energy grid for the first time.
- The 60 MW hydro expansion could be built in partnership with Aboriginal governments, creating economic opportunities for Aboriginal-owned businesses across the North.

**National Priority: Green
Infrastructure: Clean Air,
Clean Water**

"Investments in sustainable infrastructure are needed to support greenhouse gas emission reductions; enable greater climate change adaptation and resilience; and ensure that communities can provide clean air and safe drinking water for their citizens. Projects that may receive these additional investments include, among others: inter-provincial transmission lines that reduce reliance on coal-fired power generation and the development of new low-carbon/renewable power projects."

- The revenue generated from a project of this magnitude would allow for the Government of the Northwest Territories to reduce the high cost of electricity in the territory.
- The majority of Aboriginal communities in the NWT rely on off-grid diesel generation which contributes to the already high cost of living in Canada's North. The revenue stream from this proposed expansion would allow for the cost of living to be reduced through new investment.

**Pages 70 to 155
are withheld
pursuant to paragraphs
13(1)(c), 21(1)(a), 21(1)(b) and 24(1)
of the *Access to Information Act***

**Les pages 70 à 155
Font l'objet d'une exception totale
conformément aux dispositions des
paragraphes
13(1)(c), 21(1)(a), 21(1)(b) et 24(1)
de la loi sur l'accès à l'information**



Statement

For immediate release

Expanded Hydroelectricity and Transmission Project to Reduce Diesel Reliance in Canada's North

Ottawa, Ontario, August 26, 2019 —The Honourable François-Philippe Champagne, Minister of Infrastructure and Communities, made the following statement on today's announcement by the Canada Infrastructure Bank, a Crown corporation that works with governments and the private sector to transform the way infrastructure is planned, funded and delivered.

"We welcome the collaboration between the Canada Infrastructure Bank (CIB) and the Government of Northwest Territories to advance the Taltson hydroelectricity expansion project.

The CIB's advisory expertise will be an important partner to the Government of the Northwest Territories as it supports the development of this significant project for the region. By evaluating its financial structures, agreements and bankability, the CIB can help support evidence-based decisions while exploring new and innovative approaches to project finance and delivery.

The proposed expansion would more than double current hydroelectric capacity in the Northwest Territories, reducing greenhouse gases and reliance on diesel by the city of Yellowknife and the mining sector, and providing employment opportunities for Indigenous people and other residents of the Territory.

This collaboration reflects the Government of Canada's priority to invest in green public infrastructure that supports Canada's ongoing transition to a clean growth economy."

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Contacts

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Web: [Infrastructure Canada](#)



Déclaration

Pour diffusion immédiate

Projet élargi d'hydroélectricité et de transport d'électricité pour réduire la dépendance au diesel dans le Nord du Canada

Ottawa (Ontario), le 26 août 2019 — Le ministre de l'Infrastructure et des Collectivités, l'honorable François-Philippe Champagne, a fait la déclaration suivante à la suite de l'annonce faite aujourd'hui par la Banque de l'infrastructure du Canada, une société d'État qui travaille avec les gouvernements et le secteur privé pour transformer la façon dont les infrastructures sont planifiées, financées et mises en place.

« Nous nous réjouissons de la collaboration entre la Banque de l'infrastructure du Canada (BIC) et le gouvernement des Territoires du Nord-Ouest pour faire avancer le projet d'expansion hydroélectrique de Taltson.

Grâce à son expertise en matière de consultation, la BIC sera un partenaire important du gouvernement des Territoires du Nord-Ouest, car elle appuiera l'élaboration de cet important projet pour la région. En évaluant les structures financières, les ententes et la viabilité financière des projets, la BIC peut aider à appuyer des décisions fondées sur des données probantes tout en explorant des approches nouvelles et novatrices en matière de financement et de réalisation de projets.

L'expansion proposée ferait plus que doubler la capacité hydroélectrique actuelle des Territoires du Nord-Ouest, ce qui réduirait les gaz à effet de serre et la dépendance de la ville de Yellowknife et du secteur minier à l'égard du diesel, en plus de créer des emplois pour les peuples autochtones et les autres résidents du territoire.

Cette collaboration reflète la priorité du gouvernement du Canada pour ce qui est d'investir dans les infrastructures publiques vertes qui appuient la transition continue du Canada vers une économie à croissance propre. »

- 30 -

Personnes-ressources

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Site Web : [Infrastructure Canada](http://InfrastructureCanada.ca)

Taltson Hydroelectricity Expansion Project [REDACTED]

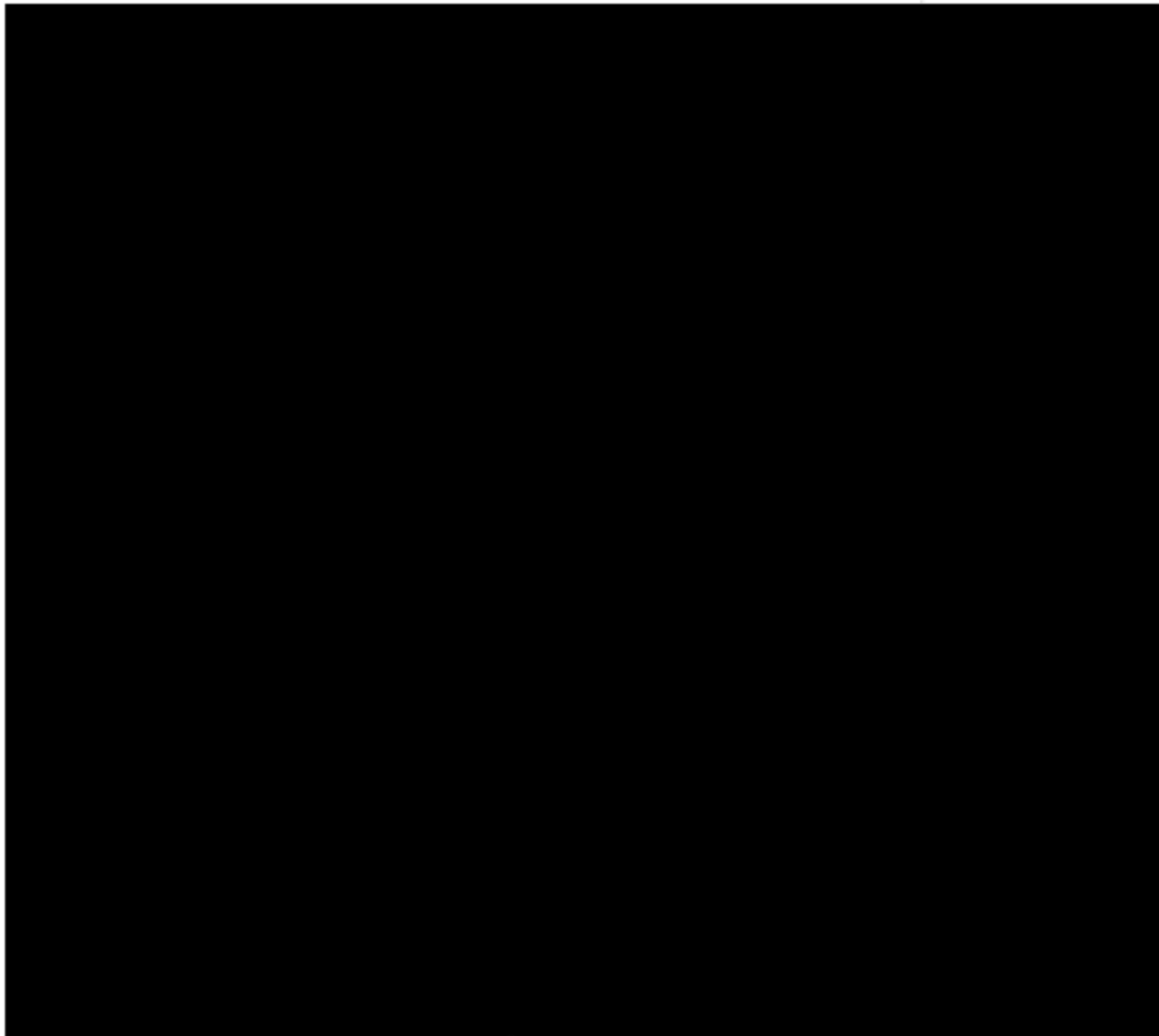
Description

- The Government of NWT (GNWT) and Indigenous groups proposed a 60 MW hydro plant and a 270 km transmission line in the NWT. The project will connect the Snare Grid and Taltson Grid, reducing reliance on diesel, as well as a more flexible and balanced load.

- [REDACTED]

Status

- [REDACTED] this is a priority project for the Government of NWT and has received federal support through \$18M Budget 2019 commitment for the feasibility study currently underway.
- The CIB is currently engaging in an advisory capacity given the early stage of this project, [REDACTED]



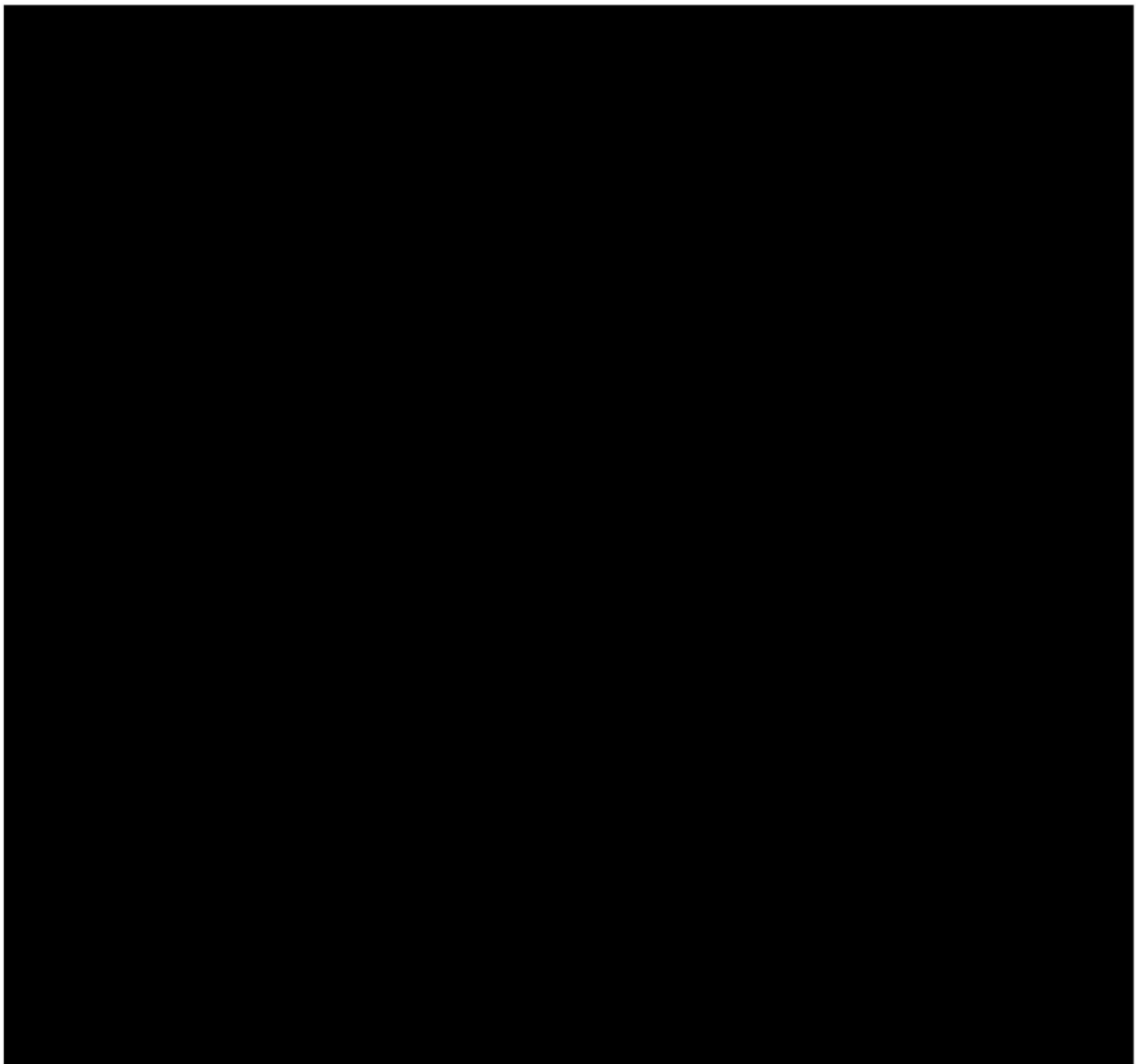
Commercial Confidential**Taltson Hydroelectricity Expansion, NWT** [REDACTED]Description

- The Government of NWT (GNWT) and Indigenous groups proposed a 60 MW hydro plant and a 270 km transmission line in the NWT. The project will connect the Snare Grid and Taltson Grid, reducing reliance on diesel, as well as a more flexible and balanced load.

- [REDACTED]

Status

- [REDACTED] this is a priority project for the Government of NWT and has received federal support through \$18M Budget 2019 commitment for the feasibility study currently underway.
- Project is currently in feasibility stage; [REDACTED]
- The CIB is currently engaging in an advisory capacity given the early stage of this project, [REDACTED]
[REDACTED]



**Pages 160 to 161
are excluded
pursuant to paragraph
69(1)(g)re(a)
of the *Access to Information Act***

**Les pages 160 à 161
Font l'objet d'une exception totale
conformément à la disposition de paragraphe
69(1)(g)re(a)
de la loi sur l'accès à l'information**

October, 2019

PROTECTED B

ATIA - 69(1)(g) - (a)

ATIA - 69(1)(g) - (c)

Taltson Hydroelectricity Expansion Project

Category: Green Infrastructure

Proponent: Government of Northwest Territories (GNWT)

Status of Approval: Advisory Engagement announced on August 28, 2019. CIB continues to advise GNWT on project development and financial structure.

Project Description:

- The proposed project involves the construction of a new 60 MW, clean energy hydroelectric facility and 270 km of transmission lines to connect the Snare Grid and Taltson Grid, reducing reliance on diesel, and facilitating a more flexible and balanced electricity load in the region.
- The project is currently at its early development stage.

Milestones:

- **August 28, 2019:** the CIB publicly announced its advisory engagement with the GNWT on the proposed project to support the development of the project's financial structure and business case.

- **March 19, 2019:** the federal budget committed \$18 million over the next three years, starting 2019-20, to support planning activities and feasibility studies by the GNWT for the project.

Considerations & Next Steps:

- This is an early stage project that still requires a significant amount of development, financial analysis and structuring, before public interest and policy alignment can be accurately assessed.

Canada Infrastructure Bank

A Catalyst for Investment in New Infrastructure



October 2019

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What We Do

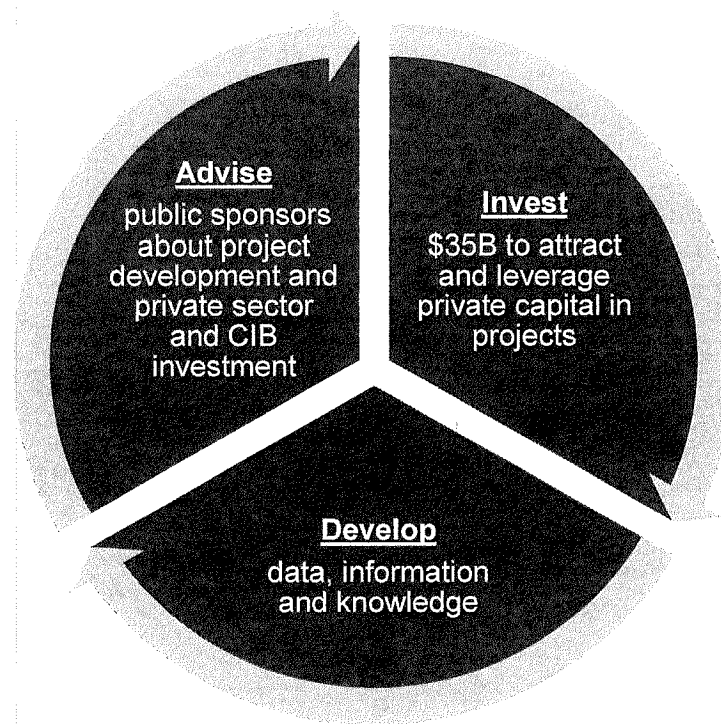
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A centre of infrastructure investment expertise



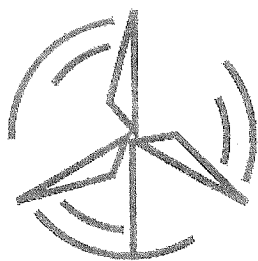
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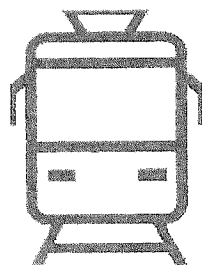
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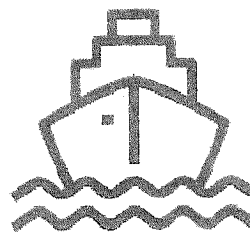
Investing \$35B with a focus on four priority sectors



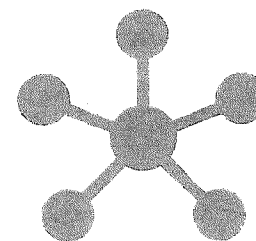
Green Infrastructure



Public Transit



Trade and Transportation



Broadband

Taking action to advance infrastructure investment

- Acting as a center of expertise
- Advising all levels of governments
- Structuring proposals and negotiate agreements
- Investing in infrastructure projects
- Receiving unsolicited proposals
- Collecting and disseminating data
- Fostering evidence-based decision making

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Cash Flow Waterfall
Units shown are CAD except where stated

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013
Income Statement									
Revenues	1,014	1,014	1,014	1,014	1,014	1,014	1,014	1,014	1,014
Operating Costs	(1,014)	(1,014)	(1,014)	(1,014)	(1,014)	(1,014)	(1,014)	(1,014)	(1,014)
EBITDA									
Interest during Operations									
Depreciation									
Provision for Taxes									
Net Income									
Statement of Cash Flows									
Net Income									
Add Depreciation									
Provision for Taxes									
Taxes Paid									
Cash from Operations									
Capital Expenditures									
Cash from Investing									
Debt Issuance									
Debt Principal Payments									
Debt Sweep Payments									
Equity Injections									
Equity Distributions									
from Financing									
Net Cash									

Advisory, project development and investment expertise

- We play an **active advisory role with public sector project sponsors**

- Increase awareness regarding innovative investment and financing models
- Assess, at no cost, revenue generating project proposals
- Build relationships with the market through tools such as market soundings to determine private sector interest
- Evaluate the public interest and bankability of projects

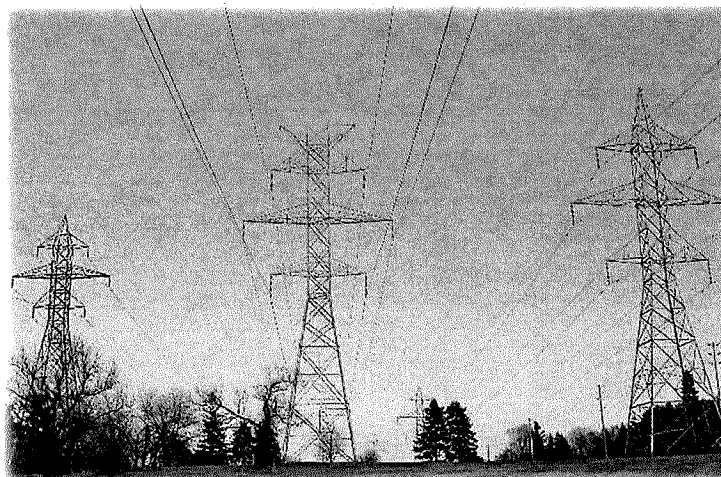
- We offer specialized commercial and **investment expertise**

- Structuring debt, equity, loans and hybrids
- Complex financial modeling
- Financial advisory
- Project structuring and procurement options

In-house expertise

- Members of our in-house investments team have worked for major banks, infrastructure and investment firms, and bring experience from large transactions in Canada and around the world in sectors such as:

- Power and renewables
- Public transportation
- Roads and toll roads
- Rail and light rail transit
- Ports
- Water and wastewater
- Broadband



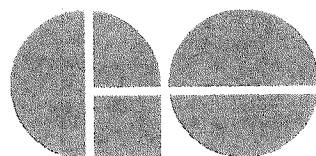
Project announcements

August 22, 2018



\$1.283 billion
(Transit Project)

May 30, 2019



Up to \$2 billion
(GO Expansion Project)

June 25, 2019



Up to \$55 million
(High Frequency Rail Project)

July 15, 2019



Up to \$20 million
(Water and Wastewater Project)

August 1, 2019



Memorandum of Understanding
(District Energy Project)

August 14, 2019



Memorandum of Understanding
(Contrecoeur Project)

August 28, 2019



Advisory Engagement
(Hydroelectricity Expansion Project)

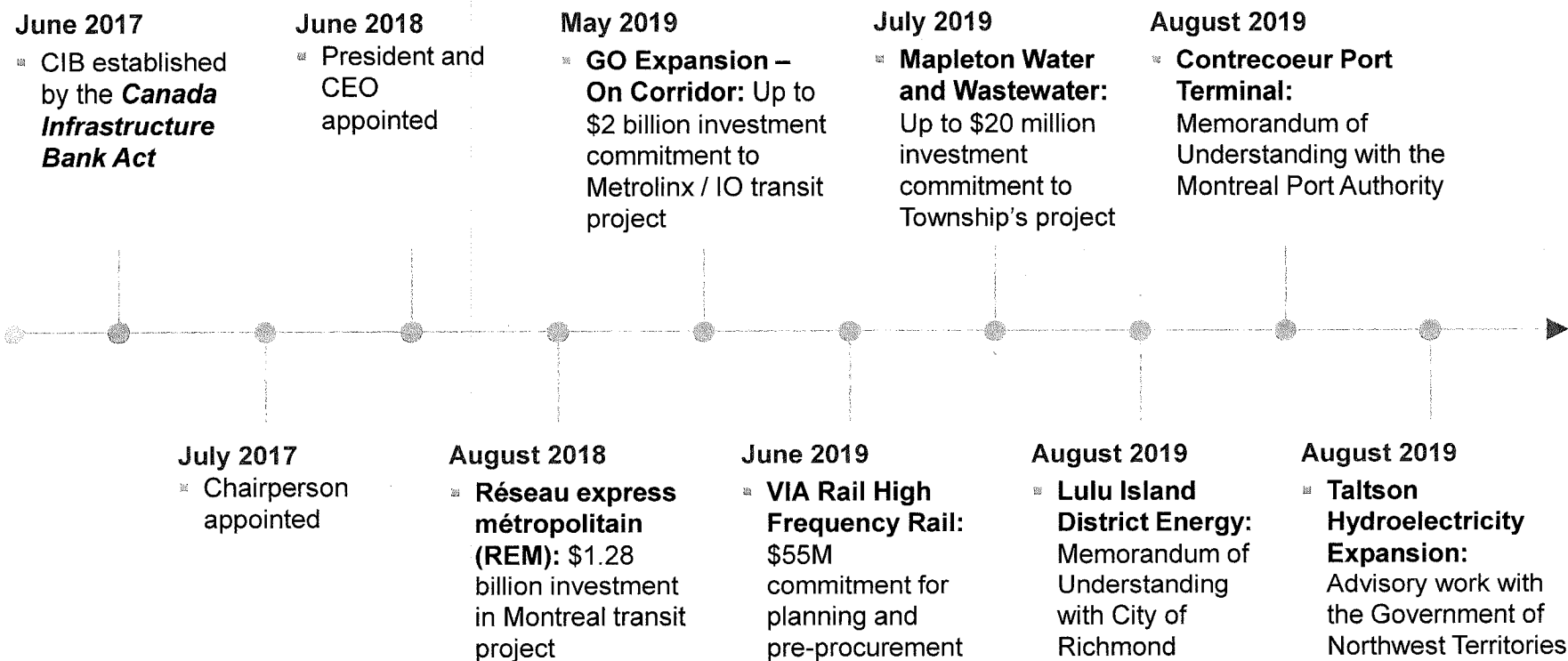
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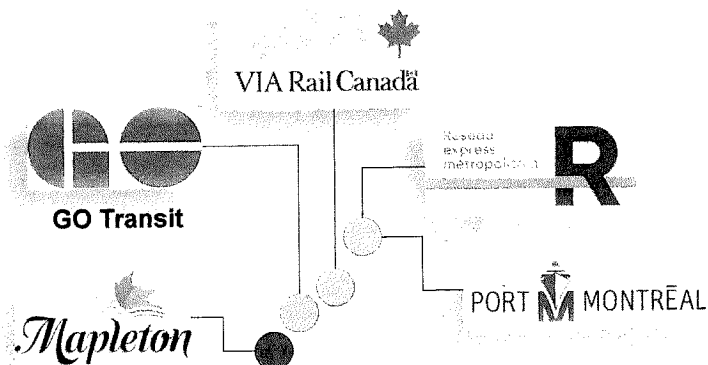
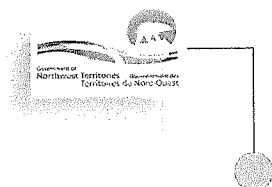
Timeline showing momentum



Green and sustainable infrastructure

Potential Green Benefits of Projects

-  Reduction of greenhouse gases
-  Clean and renewable energy
-  Clean, safe water and wastewater treatment



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Building a pan-Canadian portfolio of projects

Project	Sector	Urban	Rural	Northern	Advisory	MOU	Investment	Public Sponsor
REM	transit	X					X	Province
RER	transit	X					X	Provincial Agencies
VIA	transport	X	X		X			Federal Crown Corp
Mapleton	green		X				X	Municipality
Lulu Island	green	X				X		Municipality
Contrecoeur	trade	X				X		Port Authority
Taltson	green			X	X			Territory

Update on progress from July to September 2019

- Our advisory and investment focus resulted in the assessment of 72 new infrastructure projects an estimated capital value of \$38 billion with 26 projects in ongoing due diligence
- CIB continued outreach to public sector project sponsors, engaging 10 federal departments / agencies and 18 provincial / territorial bodies in the last three months to collaborate on advisory and investment opportunities
- We are continuing to build more formal partnerships with leading business and industry organizations who are thought-leaders regarding the opportunities to improve Canada's infrastructure



Canadian
Chamber of
Commerce

Chambre de
Commerce
du Canada



The Chamber of Commerce
of Metropolitan Montreal



ontario
chamber of
commerce



fccq | Fédération des chambres
de commerce du Québec



GREATER VANCOUVER
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Advantages of the CIB approach

- Expertise allows the CIB to play an active **advisory role with public sector sponsors** to assist them bringing forward project proposals for CIB Investments.
- Arm's length structure means independent **project investment decision-making and oversight** by the CIB Board of Directors.
- **Investments** are in projects and project structures, not government organizations or companies.
- **CIB investment fills the gap** in a project's capital structure.
- Focus is on **investing** and being a **catalyst** for new transformational infrastructure.
- CIB has **flexibility** to invest across the capital structure and brings a disciplined investing approach to projects.

Our commitment to accountability and transparency

The Minister's Statement of Priorities and Accountabilities provides direction on the CIB's overall goals. CIB's governance system for accountability and transparency includes:

- Board of Directors
- Corporate Plan, Annual Report and Quarterly Financial Reports
- Disclosure related to Privacy, Expenses, Access to Information
- Annual audit and other required reviews
- Appearances before Parliamentary Committees

How We Partner

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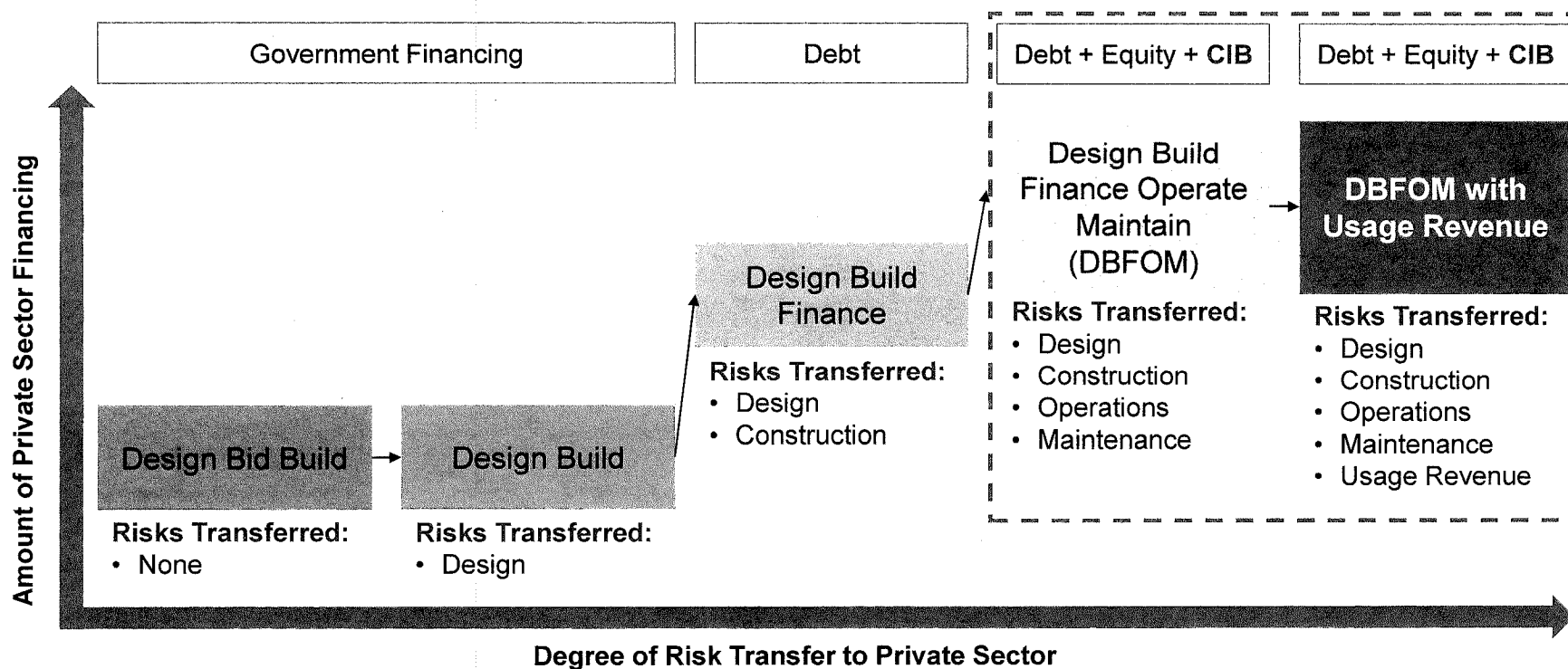
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How we work with our partners

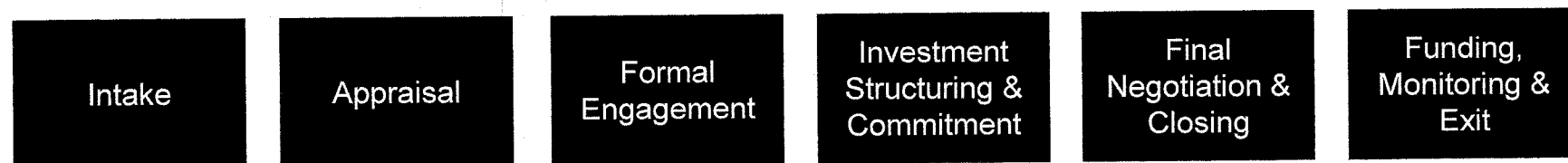
- Partner with governments on their priority projects
- Invest to fill financing gap in projects
- New revenue generating projects in priority sectors
- Attract new private capital to infrastructure projects
- Transfer appropriate risk to the private sector
- Structure terms to drive private sector performance
- Align risk with reward
- No sales of existing assets

CIB impact on private investment and risk transfer

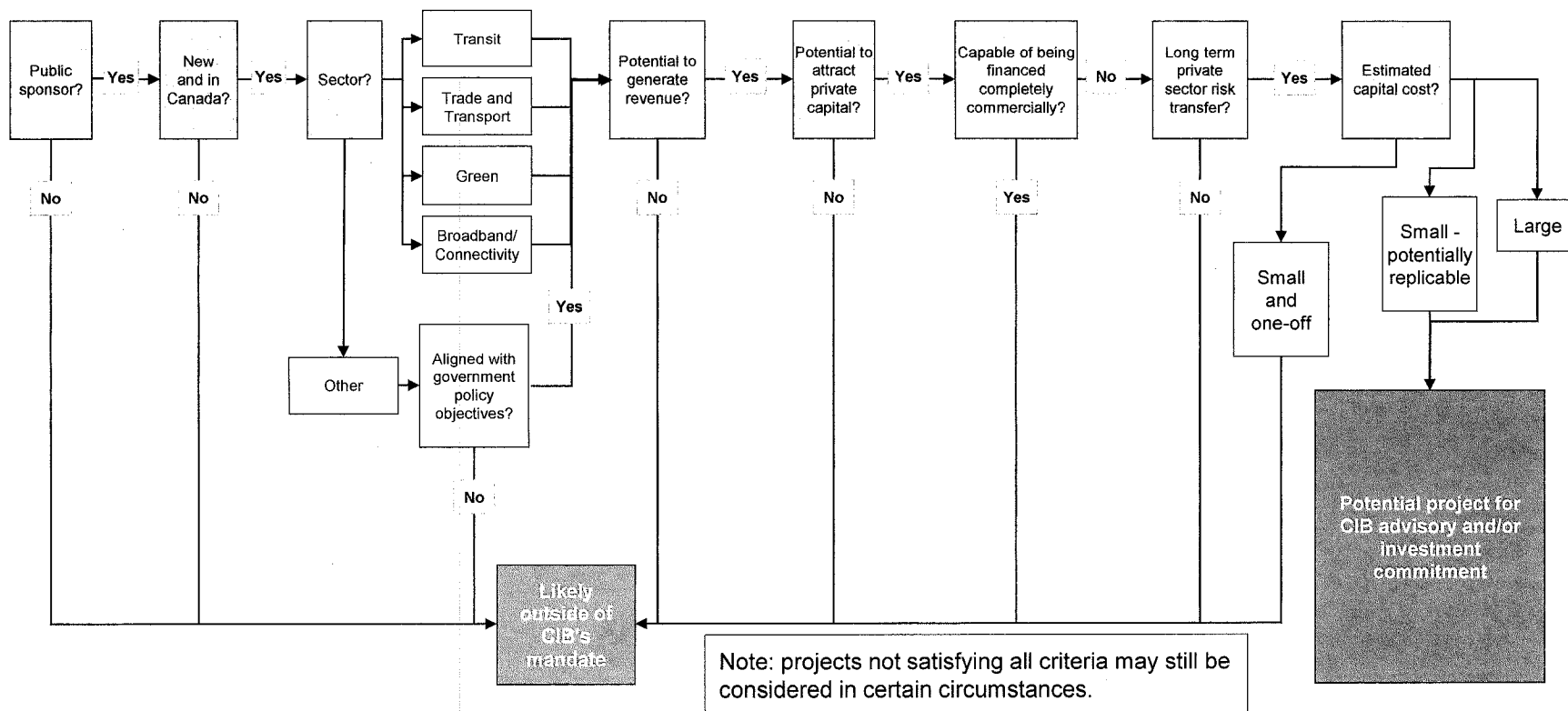


CIB utilizes structures that attract private capital and transfer risks to the party best able to manage them

Project process flowchart



Process for appraisal of potential CIB advisory/investment



Key questions for project sponsors to consider

- Does the project have a public sponsor?
- Does the project fall under one of the CIB's priority sectors?
- Does a financing gap exist in the project without the CIB's involvement?
- Is the project capable of generating material revenue?
- Is there a reasonable probability of being able to attract private capital to the project?
- Does the project transfer risk to the private sector throughout the project lifecycle?
- Is the project transformational? Does it have the potential to be scaled and replicated in other Canadian jurisdictions?

Important factors at project intake

Public Interest

- Consistent with federal infrastructure priorities and outcomes
- Alignment with government sponsor priorities (as expressed in Throne Speech, Budget, Capital Plan, government policies, project-specific announcement and more)
- Support economic growth
- Contribute to infrastructure sustainability

Bankability

- Compelling business case
- Stage of development
- Revenue generation
- Attracting private capital
- Appropriate risk transfer
- Market testing and optimization of costs

How We Innovate

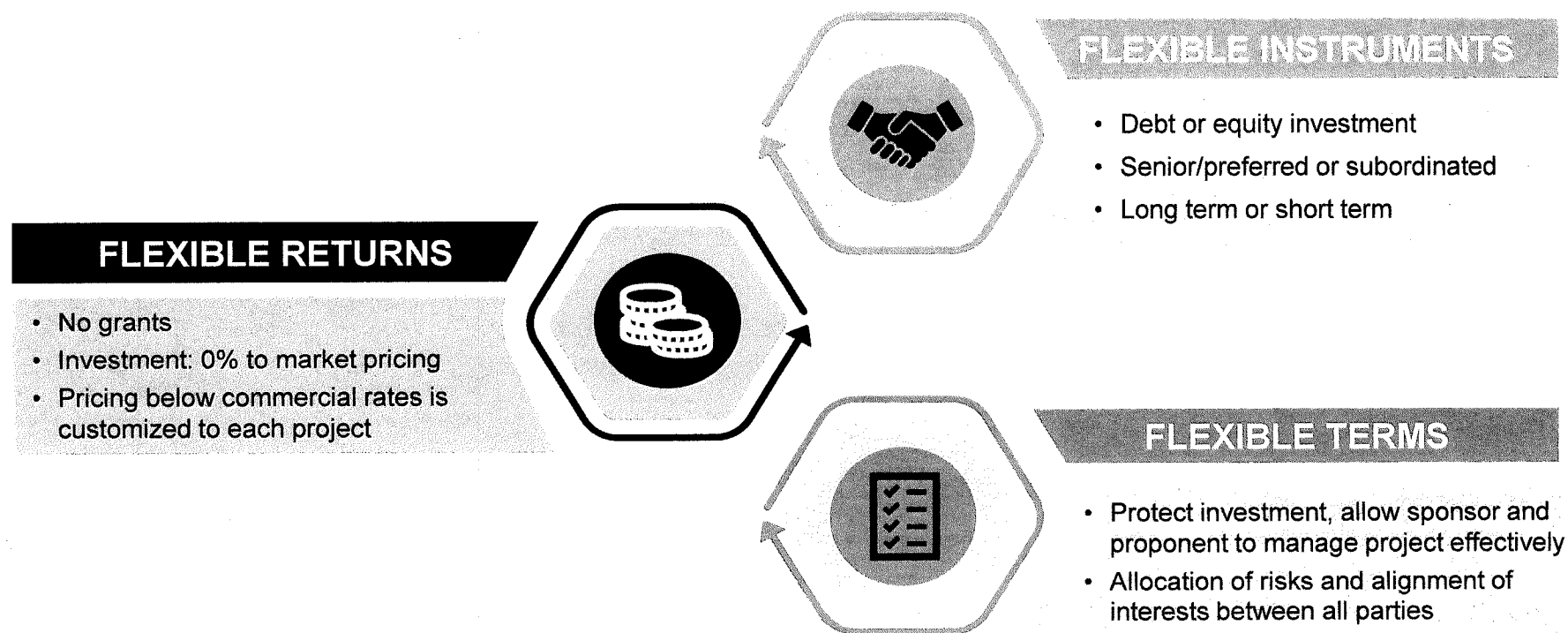
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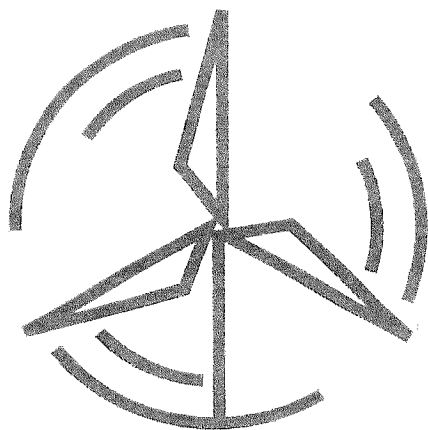
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Investment approach is flexible and customized



Green Infrastructure



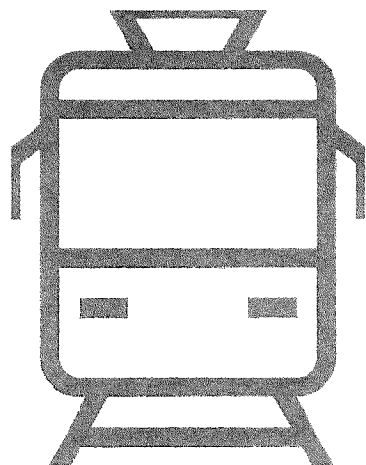
Project Opportunities

- Renewable power, especially for remote and Indigenous communities
- Municipal and Indigenous water and waste water
- Transmission projects including interties
- District energy

Innovative models that help transfer long term risk

- Merchant power generation
- Merchant transmission

Public Transit



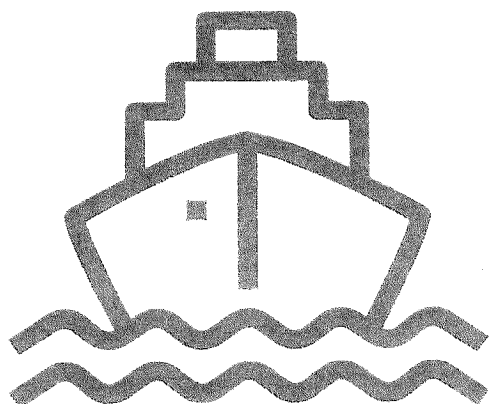
Project Opportunities

- LRTs, subways, tramways
- Bus rapid transit
- Extensions and expansions
- Transit Oriented Development

Innovative models transfer long term risk

- Operations risk
- Revenue risk, where possible:
 - Partial availability payments
 - volume risk transfer

Trade and Transportation



Project Opportunities

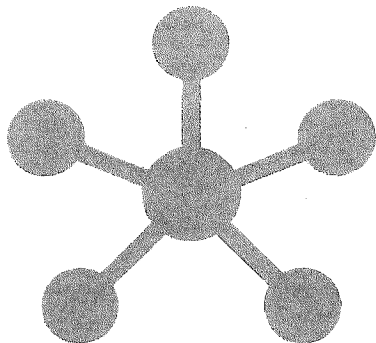
- Ports
- Freight rail
- Highways
- All-season roads
- Resource roads
- Passenger rail
- Bridges and tunnels

Innovative models help transfer long term risk

- Long term integrated concessions transfer responsibility to build and operate (BOTs) for ports and rail
- Toll roads and shadow toll roads

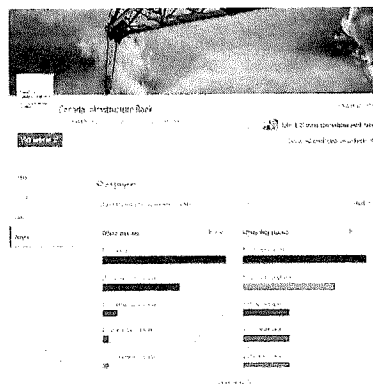
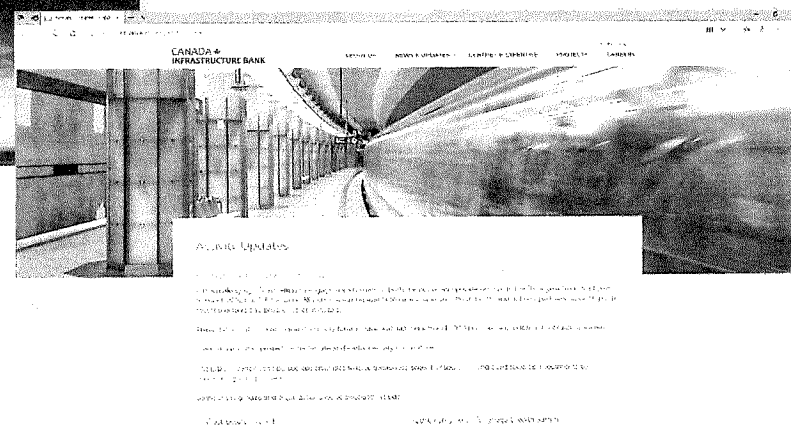
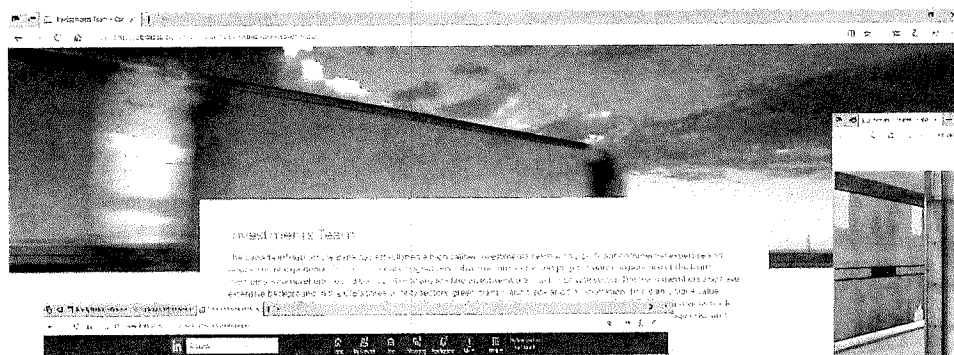
Broadband

- Commitment to invest a minimum of **\$1 billion in broadband over the next 10 years.**
 - Budget 2019, Government of Canada



- Increase high speed broadband access for Canadians in unserved and underserved communities
- Innovations that facilitate the transfer of long term risk in the following models:
 - Traditional (grant programs)
 - Public Subsidy (competitive procurements based on lowest subsidy requested)
 - Quasi Utility
 - Public-Private Partnerships

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Appendix – Our project announcements

- Réseau express métropolitain (REM) transit
- Metrolinx GO Regional Rail Expansion
- VIA Rail High Frequency Rail
- Mapleton Water and Wastewater
- Lulu Island Energy
- Contrecoeur Port Terminal
- Taltson Hydroelectricity Expansion



Project highlights

	Priority Sector	Location	CIB Engagement	CIB Commitment	Public Sponsor	Policy Goals	Revenue Generating	Private Investment Role	Risk Transfer to Drive Performance
Réseau express métropolitain	Urban public transit	Montreal metropolitan region	Investment Commitment	\$1.28B (\$6.3 billion total project capital cost)	Province of Quebec	Job creation, green house gas reduction, lower congestion	Yes – fare box	Yes – CDPQ investment	Yes
GO Rail Expansion	Regional transit	Greater Toronto Hamilton Area	Investment commitment prior to RFP	Up to \$2B (estimated \$12 billion total project capital cost)	Province of Ontario, Metrolinx	Expanded access to two-way all-day regional transit for 200 million trips per year	Yes – fare box	Design-build-finance-operate-maintain model selected by Metrolinx	Yes
VIA Rail	High Frequency Rail	Quebec City to Toronto corridor	Planning and pre-procurement activities	\$55 million	Transport Canada, VIA Rail	Faster, expanded and more frequent service to communities on corridor	To be confirmed during planning and pre-procurement by joint project office	To be confirmed during planning and pre-procurement by joint project office	To be confirmed during planning and pre-procurement by joint project office
Township of Mapleton	Rural municipal water and wastewater	Mapleton (ON)	Investment commitment after RFQ and pre-RFP	Up to \$20 million (estimated \$30 million total project capital cost)	Township of Mapleton	Expanded clean, safe, affordable public water system	Yes – regulated water rates set by Township	Yes – consortium equity investment	Yes – contract with performance requirements
Lulu Island Energy	District energy	Richmond (BC)	Memorandum of Understanding	Memorandum of Understanding	City of Richmond	Green, renewable energy for municipality	Yes – district energy users	To be confirmed through due diligence	To be confirmed through due diligence
Contrecoeur	Trade and transportation	Montreal	Memorandum of Understanding	Memorandum of Understanding	Port of Montreal	Economic growth through import and export	Yes – port operations	To be confirmed through due diligence	To be confirmed through due diligence
Taltson Hydroelectricity	Green Infrastructure	Northwest Territories	Advisory Engagement	Advisory Engagement	Gov't of Northwest Territories	Clean, power via hydroelectric plant	To be confirmed after advisory work	To be confirmed through due diligence	To be confirmed through due diligence

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Réseau express métropolitain (REM)

Structuring

- **CIB: \$1.283 billion**
 - ✦ 15 year loan, 1-3% interest
- **CDPQ: \$2.961 billion**
 - ✦ preferred equity
 - ✦ 8% preferred return
- **Government of Quebec: \$1.283 billion**
 - ✦ non-voting subordinated equity

Risk Transfer and Affordability Benefits

- CIB role improved risk transfer to the institutional investor (CDPQ Infra)
- CIB concessional investment improved project affordability
- CIB converted traditional investment to repayable loan



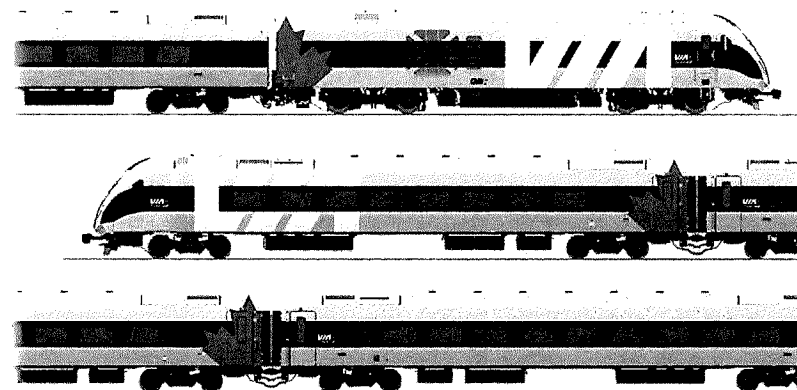
GO Rail Expansion – On Corridor

- Up to **\$2 billion**
- New, **transformational project** in the Greater Toronto and Hamilton Area
- **Low-interest financing** to proponents balanced with risk transfer to the private sector
- Funding commitment **supports CIB's mandate** to invest in transportation
- **Partnering** with Metrolinx and Infrastructure Ontario who are leading competitive procurement process
- Optimizing risk transfer and crowding-in more private capital than originally planned



VIA Rail Canada – High Frequency Rail

- Up to \$55 million
- New, **transformational project** benefitting those in the Quebec City to Toronto corridor
- Funding commitment **supports CIB's mandate** to invest in public transit
- **Partnering** with VIA Rail and Transport Canada on pre-procurement, due diligence and de-risking activities
- Bringing **expertise** in infrastructure and financing to support planning work over the next two years



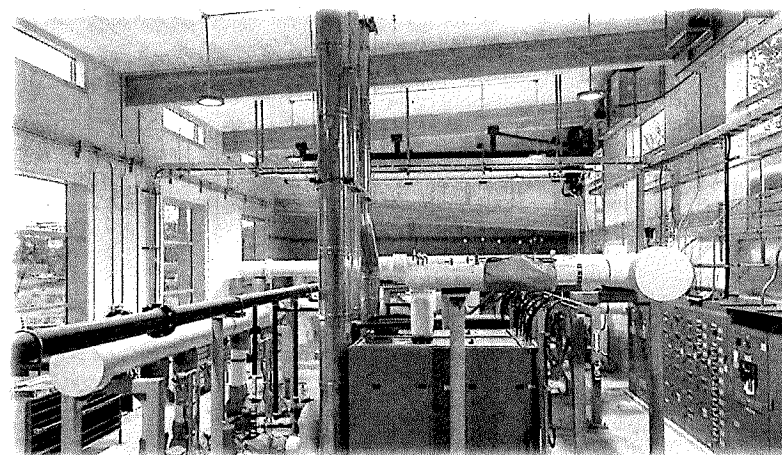
Township of Mapleton – Water and Wastewater

- **Up to \$20 million**
- CIB's first investment in **green infrastructure**
- The project **will expand access to safe** drinking water and capacity for the treatment of wastewater for up to 20 years
- **Mapleton will continue to own** all existing and new infrastructure assets
- A **pilot project** to demonstrate new models for structuring and financing smaller municipal water and wastewater infrastructure projects



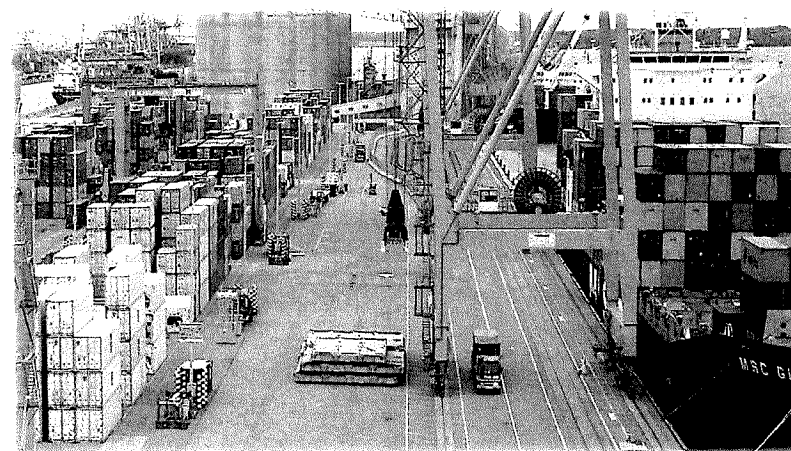
Lulu Island Energy Company – District Energy

- **Memorandum of Understanding**
- **First** opportunity in **district energy**
- City to expand its **clean, renewable district energy** system from 3 million square feet to 50 million square feet
- **City of Richmond will own** all existing and new infrastructure assets
- Consistent with CIB mandate to **advise on** and potentially **invest** in green infrastructure projects



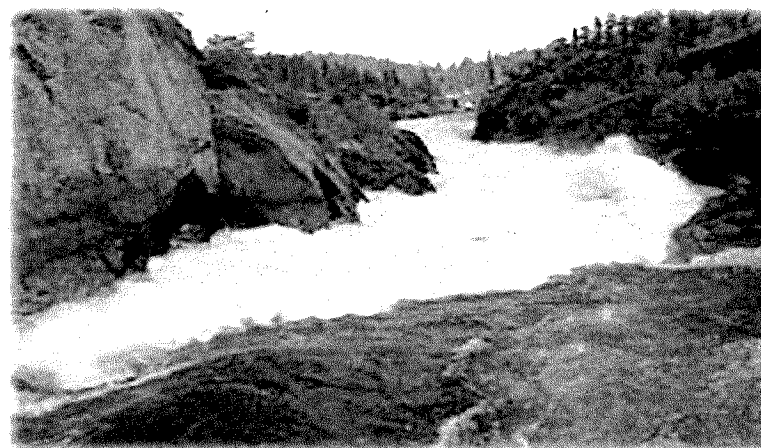
Contrecoeur Port Terminal

- **Memorandum of Understanding**
- **First opportunity in trade-related project**
- Montreal Port Authority's new terminal will enable importers and exporters to get products to market quicker **supporting Canada's economic growth and international trade**
- Consistent with CIB mandate to **advise on** and potentially **invest** in transformational infrastructure projects



Taltson Hydroelectricity Expansion

- **Advisory engagement** to develop project's business case
- **First opportunity in hydroelectricity** and in **Northwest Territories**
- Proposed expansion of the existing Taltson generating station by constructing a new 60 megawatt, **clean energy hydroelectric facility** and 270 kilometres of transmission lines
- Consistent with CIB mandate to **advise on green** infrastructure projects



What others are saying about recent announcements

As a strong supporter of the concept of the Canada Infrastructure Bank and its potential to **leverage new kinds of investments in major infrastructure projects**, we and our big-city Chamber colleagues in the Canadian Global Cities Council can now point to two major transit-related investments in Canada's two largest cities.



TORONTO
BOARD OF TRADE

This \$2 billion commitment by the CIB delivers **new money for GTHA transit** and will attract additional investment from the private sector that will **strengthen Ontario's economy**.



ontario
chamber of
commerce

From a public policy standpoint, the CIB provides **opportunities to improve the delivery of new infrastructure projects** and produce a socially beneficial result. The investment in Ontario's GO Expansion fulfills those goals.



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The announcement that the Canada Infrastructure Bank is involved in the file is particularly promising because it **will accelerate upstream planning and the eventual completion of the project**.



The Chamber of Commerce
of Metropolitan Montreal

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**Pages 201 to 202
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**Les pages 201 à 202
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de la loi sur l'accès à l'information**

Quarterly Progress Report – October 2019

Working Coast to Coast to Coast

- Memoranda of Understanding signed on two projects that could lead to CIB investment commitments as part of our growing portfolio of projects across Canada
 - **City of Richmond, Lulu Island Energy Company Project (BC)**
 - **Montreal Port Authority Contrecoeur Project (QC)**
- Up to \$20 Million investment commitment announced towards a new rural water and wastewater pilot project
 - **The Township of Mapleton (ON)** invited the CIB to be part of a project that will deliver modern publicly-owned water and wastewater infrastructure
- Advisory engagement initiated to support a public sector project sponsor plan its transformational project
 - **Taltson Hydroelectricity Expansion Project (NWT)**

Building Partnerships

- Engagement increased with leading business organizations regarding Canada's infrastructure opportunities



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of Metropolitan Montreal**



**GREATER VANCOUVER
BOARD OF TRADE**



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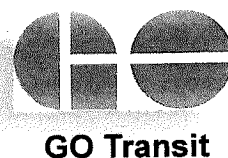
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Our Advisory and Investment work resulted in the assessment of **72 new infrastructure projects** with an estimated capital value of **\$38 billion** with **26 projects** in ongoing due diligence

Quarterly Progress Report – October 2019

Direct Benefits of Projects

-  Reduction of greenhouse gases
-  Clean and renewable energy
-  Clean, safe water and wastewater treatment



VIA Rail Canada 

Reseau
express
métropolitain



**Pages 205 to 206
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